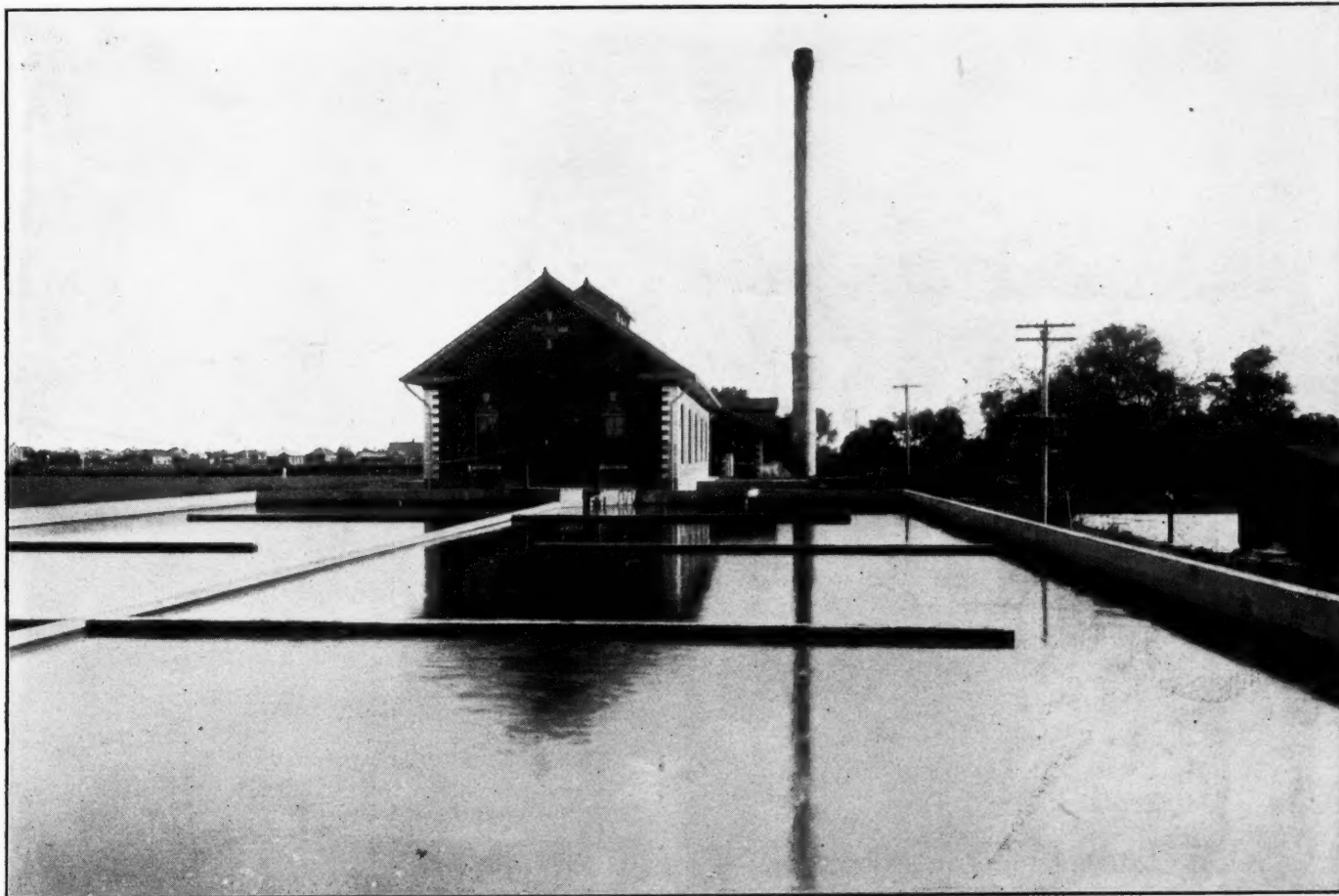


# Municipal Journal And Engineer

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No. 11.



SETTLING BASINS AND FILTER HOUSE, OKLAHOMA CITY WATER WORKS

## WATER WORKS OF OKLAHOMA CITY

**Purification Necessary—Rotary Low Service Pumps—Direct Acting High Pressure Pumps—Sedimentation with Coagulants—Mechanical Filtration—Degree of Purification Obtained**

OKLAHOMA CITY, OKLA., in 1900 had a population of 21,875, since which time the population has more than doubled. The city has several miles of well-paved asphalt streets, an extensive system of sanitary and storm water sewers, and a few months ago completed a new municipal water works plant. Early in 1906, under the administration of Mayor J. F. Messenbaugh, the city obtained plans and specifications for a new water works system, including purification works. The question of water supply was not a simple one to solve, as neither of

the two sources of supply available was without its objections. The water obtainable from wells was hard and limited in volume, and, after expending several thousand dollars in extensive well tests, this source was abandoned for the North Canadian River. This stream carries a large amount of suspended matter, including a very fine silt, which it is found difficult to remove in settling basins without the aid of coagulants. The bacterial content of the water also was high, and purification works were therefore considered essential.

The conditions found at Oklahoma City were not peculiar, as few cities in the new State have been fortunate enough to secure water in sufficient quantities from wells and few of the streams of the State furnish water of a quality suitable for use without purification. It is probable, therefore, that many other cities of that region will find it necessary to follow the example of Oklahoma City in the purification of its water supply.

The general design of the works followed the requirements of the Board of Underwriters as nearly as the funds would permit. Water is taken from the river by two rotary steam-driven pumps, each having its independent suction line and each having a capacity of 4,000,000 gallons in 24 hours. They are located in a pump pit of a depth which permits the water to flow to them by gravity, thus avoiding the suction lift. These pumps discharge the water into the settling basins. From these basins the effluent flows by gravity to the filters. The filtered water is delivered into a clear water reservoir, from which it is pumped into the distribution system by two Worthington compound condensing pumping engines and one 6,000,000-gallon triple-expansion engine furnished by the Prescott Pump Company of Milwaukee, the total capacity of the high-pressure pumps being 12,000,000 gallons. These pumps deliver the water into a 24-inch main, from which it is distributed throughout the town. Steam is furnished by three high-pressure water tube Erie City boilers of 200-horsepower each, to which the fuel is fed by mechanical stokers. The smokestack is of reinforced concrete construction, built by the Weber Steel Concrete Chimney Company of Chicago, and was the first concrete chimney built in the State.

The water works buildings, which are shown in the illustrations, are architecturally pleasing and are of fire-proof construction, the walls being brick, with cut-stone trimmings, and the roof being covered with slate. There are two houses, a filter house and power house, the designs of both being similar. In the interior of the buildings are wainscotings of white enameled brick, and the pump pit also is lined with the same, this adding to the

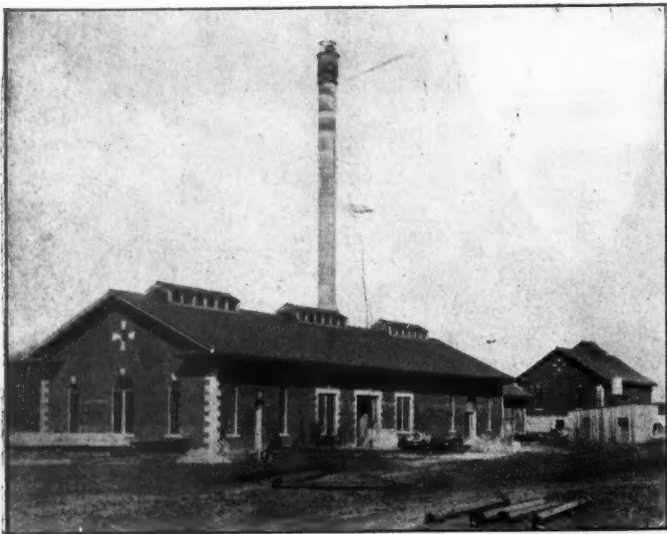
appearance of cleanliness as well as to the lighting of the building. It also facilitates the work of cleansing the building and of keeping it in an immaculate condition so desirable in a structure of this character.

The crude water is discharged by the rotary pumps into reinforced concrete settling basins, which are built in duplicate. Convenient hose connections are provided for cleaning, outlet drains carrying the wash water to a point in the river below the intake pipes. It has been found that an average of 82 per cent. of the impurities are removed from the water in the settling basins, this action being increased by the addition of a solution of sulphate of iron and sulphate of lime to the raw water, which chemicals not only act as a coagulant to precipitate the impurities in these basins, but the coagulant also collects in the mechanical filters to assist in their action.

The filters are arranged in four units of 1,000,000 gallons each and receive the effluent from the settling basins by gravity. They are downward flow sand filters furnished by the Greer Filter Company of Pittsburg, Pa., which company also had the contract for the buildings and all other parts of the plant. The flow of water to and from the filters is controlled by hydraulic valves. On the operating floor are marble stands containing the necessary appliances for noting loss of head and pressure in the filters and for automatically indicating when cleaning is required. The washing of the sand is accomplished by a reversal of flow of water, combined with agitation of the sand and blowing air through the sand and water. This cleaning process requires from ten to fifteen minutes and uses an average of 4 per cent. of all the water filtered.

In the valve and machinery room is located an electrical motor, which furnishes the power for solution pumps, blower, hoist and the mechanical operation of the filters, all of which are regulated from the operating floor of the filter house. The filter house is also provided with a concrete storage room for chemicals and an electrical hoist for handling same.

The amount of lime and iron used in the purification varies with the quality of the raw river water, which is always more or less turbid. In the several months during which the plant has now been operated the quantity of chemicals used has averaged three-fourths of a grain of lime and one grain of iron per gallon of water treated. The specifications required an averaged purification of 97 per cent., at a cost for chemicals not to exceed \$3.00 per million gallons and the use of not to exceed 5 per cent. of wash water. As stated above, the amount of wash water required is about 4 per cent. During the several months of operation the average purification has been 98¼ per cent. The monthly average of bacteria in the raw river water has been 12,510 per cubic centimeter and the average number of bacteria in the filtered water 236 per cubic centimeter. So great is the turbidity of the river water at some seasons of the year that an ordinary drinking glass will show a deposit of one-half to three-fourths of an inch of sediment after standing for a day. The filtered water, besides showing a high bacterial efficiency of



POWER HOUSE AND FILTER HOUSE

filtration, is clear and sparkling, and the number of consumers has greatly increased because of the improvement in quality and appearance.

A further requirement of the contract was that the filtration works should be in charge of a competent chemist and bacteriologist furnished by the contractor for a period of one year after the completion of the plant. A well-equipped chemical laboratory has been provided in the filter house, where daily tests are made and the entire operation of the plant is carefully watched.

The distribution system consists of about forty miles of cast-iron mains, the smallest laterals being six inches in diameter. These were laid by the city by day's labor, under the direction of the water works superintendent, and at a considerable saving over prices submitted by contractors. In the business district, containing six and eight story buildings, the fire hydrants are provided with steamer nozzles. All hydrants have gate valves for shutting off the water in case of accident. To prevent unnecessary waste of water and to facilitate collections, meters are being installed by the city.

Rapid growth of the city was anticipated and the works were planned with a view to early additions and extensions, and steps are already being taken for additional filters and for extensions to the distribution system. The designing and consulting engineers for this plant were Burns and McDonnell, of Kansas City, Mo., while W. C. Burke, the City Engineer, had general supervision of construction.

#### Copper Sulphate for Sewage Filters

PAWTUCKET, R. I., in 1906 found its filter beds so clogged with stored nitrogen and fatty matters which had accumulated during the previous winter, that when the spores of micro-organisms, chiefly *oscillaria*, were carried onto the beds the conditions were most favorable for the production of a network of the growths forming a thick, heavy layer, simulating rubber, greenish black in color, very tough and impervious to water. This probably would not have occurred had the beds been able to dry out quickly; this drying-out being further prevented by the increase in strength and quantity of sewage without corresponding increase in filter area. Resurfacing the beds and careful regulation of dosing helped matters, but the most effective relief was obtained by cleaning the distributor of growths with steel brushes and washing with copper sulphate, and dosing the sewage with the same as it left the settling tanks. The State Board of Health, in December, 1906, reported: "This plant is now giving good results under unfavorable conditions as to season, while before the copper treatment, under the most favorable conditions of summer and early fall, the results were so poor that the plant was nearly out of commission at times." The nitrification of the plant was not injured in the slightest degree by the copper sulphate, but on the contrary continually increased during the period of treatment.

Early in the summer of 1907 these filter beds began to show patches of similar growth. The sewage was at once

dosed with one part of copper to 50,000 of sewage and the beds immediately improved, and became comparatively free from growth after seven or eight applications, being meantime dosed at the rate of 100,000 gallons per acre every other day. By carefully using this treatment the beds were kept in excellent condition all of last summer, instead of being stagnant and with no nitrification, as was the case the previous year. Moreover, beginning about July 1 the dose of 100,000 gallons per acre was made daily instead of every other day, which in August was changed to 200,000 gallons every other day. In their report for July-December, 1907, the State Board of Health states:

The work has shown that if the underdrainage has been investigated and found to be free from clogging, and a sewage bed shows a growth of *oscillaria* and similar growths, they can be removed by application of copper sulphate to the sewage, and the bed can then be kept in excellent condition, as far as these growths are concerned, and can do all that could naturally be expected of the bed in view of its age and its past record, if copper sulphate is kept on hand and applied at the first reappearance of the growths. This can be accomplished at comparatively slight expense and with a small amount of labor.

Experiments as to the best way of applying the dose showed clearly that it was better to apply a large dose at less frequent intervals rather than a small dose several times a day.

Credit for these experiments and results is due to City Engineer George A. Carpenter and the State Board of Health, who cooperated in the investigation.

#### METAL FILAMENT LAMPS

Tungsten Lamps for Street Lighting—Require Sixty-two Per Cent. Less Energy—Comparison with Carbon Filaments and Mantle Gas Lamps

BY ALTON D. ADAMS

TUNGSTEN incandescent lamps with an efficiency of 1.33 watts per candlepower are now available for street lighting on series circuits, with either direct or alternating current, in units of 60 candlepower.

Compared with the ordinary efficiency of 3.5 watts per candlepower in carbon filament lamps for series circuits, the Tungsten lamp thus offers a saving of 62 per cent. in required energy per candlepower hour.

Much importance attaches to the fact that these new metallic filament lamps are available for series circuits, and may be operated with either direct or alternating current, for most incandescent street lamps are now connected on series circuits that carry alternating current.

Series circuits have ever been the prevailing method of distribution for street lamps, owing to the greater investment necessary for multiple distribution, and alternating current is preferred to the direct because it is cheaper to install and operate constant-current transformers than constant-current dynamos. Tungsten lamps for series circuits thus fit exactly into the present system of operating incandescent street lamps.

The use of efficiency represented by series Tungsten lamps over those with carbon filaments, and their adaptation to existing circuits and equipments, should largely



increase the relative extent of electric incandescent street lighting over that with electric arc and gas lamps because of the reduced amount and cost of necessary electric energy.

Series carbon filament lamps in common use for street lighting range from 25 to 50 candlepower each, and while 3.5 watts per candlepower is the efficiency more generally selected, the smaller size may be had for 4 watts per candlepower and the larger size for 3 watts. An objection to the 50-candlepower 3-watt series lamp with carbon filament is its shorter life.

At the more common efficiency of 3.5 watts per candlepower, the 30-candle carbon lamp operates with 105 watts and the 50-candle carbon lamp with 175 watts, while the 60-candlepower Tungsten lamp requires only 81 watts. If two of the 30-candle carbon filament lamps are replaced by one 60-candle Tungsten lamp the saving of energy will be 61 per cent., or if each of the 30-candlepower carbon lamps is replaced by a 60-candlepower Tungsten lamp the saving of energy with double the light will still be over 22 per cent. Fifty-candlepower carbon lamps may be replaced by an equal number of 60-candlepower Tungsten lamps, and the reduction of required energy will reach 53 per cent.

In general, while the Tungsten lamp will give the same candlepower as the carbon, with only 38 per cent. as much energy, for the same rate of energy consumption the Tungsten lamp will give 2.63 times as much light as the carbon filaments.

Comparing Tungsten filaments with mantle gas lamps, on the assumption that the light of the 60-candlepower Tungsten is fully equal to that of the mantle lamp using 3.5 feet of gas per hour, for 4,000 hours of lighting per year the Tungsten lamp will consume 324 kilowatt hours, costing \$19.44 if the electric service is rendered at the rate of 6 cents per kilowatt hour to cover energy, care and renewals. The mantle lamp using 3.5 feet of gas per hour will burn 14,000 feet during the 4,000 hours of lighting, amounting to \$14 at \$1 per thousand, or to \$10.50 at 75 cents per thousand feet. If the renewal of mantles and the use, repair and lighting and extinguishing of the gas lamps is fixed at three cents per lamp per night, or \$10.95 per year, the figures used in the recent Buffalo contract, the total cost per lamp will be \$21.45 per year with gas at 75 cents per one thousand feet, and \$24.95 with gas at \$1 per thousand. Even at two cents per lamp per night, or \$7.30 per year, for the use and care of the gas lamps, the light of the mantle will cost \$17.80 with gas at 75 cents per thousand, or \$21.30 with gas at \$1, per year of 4,000 hours.

With carbon filament lamps operating at 3.5 watts per candlepower, it has seldom been possible in the past for a city to get as much light for a dollar as could be got with incandescent gas mantles. As the above figures show, the Tungsten lamp, by operating with only 38 per cent. of the energy necessary per candlepower with carbon filaments, tends strongly to make electric street lighting cheaper than that with gas. This comparison of costs for gas and electric street lamps refers only to the ordi-

nary upright mantle gas burners generally used for street lighting in the United States, which yield about 15 to 20 candlepower per cubic foot of gas consumed per hour when the mantles are new and the burners are properly adjusted for the local gas pressure. At these burners the lighting and extinguishing appear to be done exclusively by hand in the United States. With ordinary mantle burners lit and extinguished by automatic means, and with intensified burners that yield 30 and more candlepower per foot of gas burned per hour, all of which are largely used for street lighting in England, even Tungsten lamps will find it hard to compete on a cost and candlepower basis.

Comparing a 400-watt enclosed alternating arc lamp with the 81-watt Tungsten filament, it may be noted that the arc takes nearly five times the power of the incandescent. It is favorable to such an arc lamp to assume its intensity as 300 candlepower in any direction 10 degrees below the horizontal, and if the arc is 25 feet above the street surface it will give an illumination of .02 candle foot at a distance of 120 feet from the lamp standard. On this basis the standards for these arc lamps should thus be 240 feet apart.

The Tungsten lamp giving 60 candlepower in a direction 10 degrees below the horizontal, and located 15 feet above the surface of the street, yields .02 candle foot at a distance of 52 feet from its standard, so that the distance between such lamps will be 104 feet for the minimum illumination named.

It thus appears that for an illumination of .02 candle foot at points midway between lamps, on surfaces at right angles to the rays of light, there must be 2.3 times as many Tungsten lamps as there would be of enclosed arcs per mile of streets. While the enclosed arc lamp operates with 400 watts, the necessary Tungsten lamps to give the same minimum light will consume only 186 watts, or 46 per cent. of the power at the arc. With the same rate for electric energy, including service, with either of these lamps, the Tungsten filament will save 54 per cent. of the cost and operating energy of the arc for the same light between lamps.

Five of the Tungsten lamps, taking energy at the same rate as one arc, might replace it on each 240 feet of street, and would then be only 48 feet apart. At points midway between these Tungsten lamps the illumination would be .075 candle foot, or nearly four times that at points midway between the arcs, and the general effect would be far more pleasing with the former.

Besides the above 60-candlepower Tungsten lamps, some of which are now in use on series circuits for street lighting, the manufacturers promise shortly to deliver 32 and 40 candlepower sizes. For all these Tungsten lamps the mean horizontal candlepower is the basis of the rating, but some makers claim an efficiency of 1.25 watts and some of 1.33 watts per candlepower. With 32-candle lamps operating on only 40 watts each, present 25-candle carbon filaments consuming 87 watts may be replaced, lamp for lamp, with a saving of more than 50 per cent. in energy.



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It is also desired that the facilities furnished by the reference library in this office should be widely known and freely used by those interested in municipal affairs. Visitors will be welcomed and provided with conveniences for search, and inquiries by mail will be promptly dealt with.

MARCH 11, 1908.

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### Bookkeeping for City Departments

WE received, a few days ago, a request for a "system of bookkeeping, simple yet complete, which would be suitable for use in our Street and Sewer Department." One object aimed at is the furnishing of information "enabling us to accurately ascertain the cost of any particular job, or figure understandingly on any new work." We have, from time to time, received requests for methods of bookkeeping adapted to various city departments and to medium sized cities as a whole, but either the modesty of city officials whom we have addressed or their belief that the methods used in their cities are not deserving of imitation seems to have prevented them from furnishing us with descriptions of the methods they are using. Of water works bookkeeping methods there are several in

general use, some of them patented. But other public utilities do not seem to have been favored with equal attention. We are therefore appealing to our readers to help us to help their fellow officials in other cities by sending us for publication any ideas embodied in the bookkeeping methods of their respective cities which appeal to them as worthy of general adoption.

### Mortality Statistics of 1906

THE Census Bureau has just published its Seventh Annual Report on mortality statistics, giving the figures for 1906. These statistics include only the States whose laws concerning registration of deaths have been accepted as securing practically complete returns, together with cities in other States where the local laws are equally satisfactory. Fifteen States are included in the list and 77 cities in other States; the combined population of these being about 48.8 per cent. of that of the entire country. Nine of the fifteen are New England and Middle Atlantic States, and all but Maryland lie in a latitude north of 45 degrees. Moreover, of all the States in the Great Mississippi basin, only Indiana, South Dakota and Colorado are in the "registration area." It is to be hoped that the remaining States will appreciate the desirability of at once improving their laws regarding the registration of vital statistics.

Of the States included, South Dakota had the lowest death rate and Rhode Island the highest, the rates being 8.8 and 17.5 per thousand, respectively. Indiana was the next lowest with 12.5, and Michigan next with 14.3. For all cities where the colored population constituted ten per cent. or more of the whole, the death rate of this race was more than 60 per cent. higher than that of the white population.

Of the causes of death, consumption ranks first, with pneumonia a close second, heart disease third, and diarrhea and violence almost tying for fourth place. Typhoid fever showed a death rate of 32.1 per one hundred thousand. In the registration cities the rate was 34.2 in 1906, while it was about 30.1 in 1905, the explanation of the increase probably being that the 1906 records included several cities with high rates which were not included in 1905. Pennsylvania showed the highest rate (56.5), and Colorado next (56.0); while Massachusetts was lowest (16.1), and Rhode Island next (16.5). Of all the cities, Pittsburg's typhoid rate was highest (141.3) and Allegheny's next (136.3).

Of the thirty-six registration cities containing over 100,000 inhabitants in 1900, sixteen showed an increased death rate from tuberculosis for 1906 as compared with 1905, and three of these had a higher rate in the latter year than in any of the years from 1902 to 1906. For the same five years, eight cities showed the lowest death rate in the last of them. Of the larger cities those with the highest mortality rates from this disease were as follows: Denver, Col. (454.2); New Orleans, La. (280.8); and Cincinnati, O. (271.1). It is probable that Denver's rate is largely due to cases acquired in other localities.

## NEWS OF THE MUNICIPALITIES

Divers Subjects of General Interest and Their Treatment by City Councils and Officials—Streets, Water Works, Lighting and Sanitary Matters—Police and Fire Items—Government and Finance

### ROADS AND PAVEMENTS

#### Road Work in Maine

Augusta, Me.—The year 1907 was a red letter year for State road work in Maine, according to the report of Paul D. Sargent, Commissioner of Highways. It was the first year in which requests for State aid exceeded the appropriation. Seventy-nine miles of road were reconstructed at a cost of \$169,900. Included in this were 5.23 miles of roadway surfaced with macadam at a cost of 40 cents per square yard, or \$5,828 per mile. About sixty miles were surfaced with gravel, a large part of it being underdrained. A section of 3,816 linear feet of sand-clay road was built in Madison, at a cost of \$529, and a short piece of asphalt macadam, 300 feet long, at a cost of \$967.

#### Buffalo-Niagara Boulevard

Buffalo, N. Y.—The old scheme of a riverside boulevard from Buffalo to Niagara Falls was revived at a meeting of representative men from Buffalo, the Tonawandas and Niagara Falls at the Buffalo Club. The Niagara Boulevard Association was formed, with William A. Douglas of Buffalo as president, and Mayors J. N. Adam of Buffalo, W. H. Follette of Tonawanda, A. C. Douglass of Niagara Falls and Eugene de Kleist of North Tonawanda as Vice-Presidents. The plan is for a boulevard 200 feet wide and fifteen miles long. It is believed that the sum of \$500,000 will be sufficient for the work.

#### City Paving Plant Now Commended

Fort Worth, Tex.—The Third Ward Club, which recently criticized the city paving plant and its work, has revoked its former complaints, and now commends the plant and praises the Commissioner for purchasing it. The machinery was found by an investigating committee to be practically new and capable of performing the work required of it—in fact, the guaranteed capacity of 90 tons a day is exceeded by 50 per cent. The final purchase of the plant for \$6,500 by the city is conditioned upon the satisfactory performance of the work now in progress. The acquisition of the plant is believed to have had the effect of securing a reduction of 25 cents a yard on a paving contract, although the large amount of work contracted for, 200,000 square yards, was also instrumental in bringing in low bids.

#### Larger Municipal Asphalt Plant

Pittsburg, Pa.—During the year just closed, the Highway Bureau has done asphalt repair work to the extent of 60,000 yards. The cost has been less than that usually paid for contract work. Although the work is called patching, in one instance a whole square is resurfaced. This year a ten-ton steam roller will be purchased with a view to doing large sections of work. Superintendent O'Toole thinks it would pay to enlarge the asphalt plant so as to do all resurfacing.

#### Paved Country Road Plan Approved

Scranton, Pa.—For the purpose of promoting plans for a paved country road, a meeting was held of Supervisors, Councilmen and officials of all the boroughs along the proposed route, and a permanent organization was formed with the name of the Lackawanna County Good Roads Association, with G. S. Jones of Blakely as Chairman. One of the principal duties of the association will be to secure releases from damages as a result of the grading and paving, and to obtain from the various Councils an appropriation for the curbing.

A. B. Dunning, who has surveyed the route, says that very few changes in grade will be necessary and that the damages would be little or nothing. This is the second county in the State to adopt the system—Luzerne being the first.

### SEWERAGE AND SANITATION

#### Baltimore's Pure Milk Campaign

Baltimore, Md.—Health Commissioner James Bosley and his associates are endeavoring to secure State and municipal legislation to regulate the milk supply of Baltimore. From the Legislature, will be asked statutes regulating transportation so as to insure the delivery of milk in as good condition as when it left the dairy. From the City Council, will be asked additional powers of supervision so that the Health Department may prevent the sale of milk from unsanitary dairies or milk that has been exposed to contamination.

#### Would Fertilize Lands with Sewage

Detroit, Mich.—Some plan of sewage disposal which would provide a fertilizing material for the farming district about Detroit is being advocated by City Assessor Henry Plass. The Council Sewer Committee is considering the advisability of employing a consulting engineer to co-operate with City Engineer McCormick regarding the construction of a sewage pumping station, to be located near the Water Works Park, and, at the same time, the practicability of using the sewage for agricultural purposes may be considered.

#### No Disposal Plant for Three Years

Monaca, Pa.—State Commissioner of Health Dixon has granted a permit to the borough to empty sewage into the Ohio river until the year 1911. At present the borough has two and a half miles of sewers and has plans for extensions up to a total of five and one-half miles. After the year mentioned, a disposal plant must be built. The permit itself covers ten sheets of closely written foolscap paper carefully describing the water works, lay of streets, the sewerage system, the subsoil and geological features. A proviso is included that no pathogenic material from any laboratory shall be allowed to discharge into the sewers.

#### Sewage System Nearly Completed

Pensacola, Fla.—The work of constructing Pensacola's sewerage and drainage systems is now progressing rapidly and, in spite of obstacles encountered in the lower section of the city, the sanitary system is practically completed and will be put into commission in about six weeks. The outlet of cast-iron pipe—one of the six outlets of the kind in the country—which extends 2,200 feet from De Villier street out into the bay, is almost finished. The number of men employed in the work has averaged 150 a day.

#### Philadelphia's Sewage Disposal

Philadelphia, Pa.—The next great problem before the city of Philadelphia is the disposal of its sewage. The State Board of Health will not much longer permit the discharge of sewage into the rivers. The volume already amounts to 310,000,000 gallons daily. The trip of Director Stearns and Chief Engineer Webster, who have just returned from Europe, is the first important step toward a comprehensive plan of disposal. The problems, however, are peculiar. Philadelphia is flat, giving little natural flow to the sewage. The area is as large as London, but the population is about one-fourth. As compared with German cities, the length of sewers is five times as great in proportion to the population.

### Inspection of City's Meat

San Francisco, Cal.—At the suggestion of the Federal Bureau of Animal Industry, which called attention to the unsanitary conditions which obtained in many of the abattoirs of the city and the fact that infected meat was being sold without possibility of legal prevention, the Board of Health has prepared ordinances to be submitted to the Supervisors which provide that every person engaged in slaughtering cattle or the preparation of meat products must secure a license from the Board of Health after an examination by a Chief Meat Inspector, who shall be a graduate of a veterinary college. No slaughtering shall be done except in the presence of the Chief Meat Inspector or one of his assistants. All meats which have passed inspection will be stamped.

### WATER SUPPLY

#### Refusal to Break Water Contract

Bridgeport, Conn.—Basing its action on an opinion from City Attorney Cullinan, the City Council recently asked the Mayor to request the Board of Apportionment to withhold an appropriation for the city's water supply for the next fiscal year in order that the contract with the Bridgeport Hydraulic Company might be broken. The opinion was to the effect that the contract was a conditional one, depending upon the annual appropriation. If the city had failed to make the appropriation the company would have no right of action. The city charter provides that the expenses and appropriation of any one year shall not exceed its revenues, and that no money other than that appropriated by the Board shall be expended for any purpose. These conditions control the right of the city to make long-term contracts. Mayor Lee refused to accede to the wishes of Council, however, and the Board of Apportionment unanimously passed the annual appropriations. The Mayor, however, has signed a resolution naming a committee to investigate the allegation that one or more members of the Board of Apportionment are stockholders in the water company.

#### Purchase Land for Filtration Plant Years Before Required

Cleveland, O.—An ordinance has been passed to purchase land in Denison avenue near the Forest City Railway's power plant, for a site for a possible filtration plant, at a cost of \$65,000. While a filtration plant may not be built immediately, President W. J. Springborn, of the Board of Public Service, explained that the State Board of Health might make the filtration of water obligatory on the cities of Ohio at any time. It is probable, however, that before a filtration plant is installed, the West Side tunnel will be extended to the new intake. This will cost about \$1,000,000 but would cheapen the cost of filtration by furnishing purer water.

#### Water and Electric Plant for Grand Rapids

Grand Rapids, Mich.—Three hydraulic engineers of Toledo, Edward O. Fallis, W. G. Clark and A. H. Smith, have submitted an original plan for furnishing the city of Grand Rapids with a suitable and adequate water supply together with electric power greater than that which the city now requires. For the sum of \$1,500,000, none of which need be paid until the works are completed, the engineers agree to furnish 20,000,000 gallons of water daily and electric current to the amount of 1,200 horsepower. The proposed source is the Thornapple river, 67 feet above the city, to be further increased by a dam 40 feet high, from which water would be delivered in the city through a 48-inch pipe at a pressure of about 50 pounds per square inch without pumping. It is figured that the new plant can be operated at a cost of \$11,540 a year, as compared with \$53,506, the present cost of water and light plants. The proposition is being given the careful consideration of Council and city officials generally are manifesting an unusual interest in the matter.

### Cost of Cleaning Water Mains

Lebanon, Pa.—A communication has been received by the Water Board from the National Water Main Cleaning Company, of New York City, which proposes to clean the pipe line connecting the city with the reservoir at South Mountain so as to increase its capacity from between 65 to 175 per cent. A charge of 35 cents a foot is to be made for 12-inch pipe and 45 cents for 16-inch pipe. To clean the entire pipe line for five miles would cost about \$10,000—almost one-quarter of the cost of laying a new line exclusive of the pipe. The pipe would be cleaned in sections of 500 or 1,000 feet, and water would have to be cut off from four to six hours at a time. The progress of the work would be about a mile a week.

### Storage for Water Purification

Lynn, Mass.—The Water Board, which has favored a filtration system for the city's water supply, and the City Council, which has opposed the plan, have reached an agreement and have submitted a new proposition to the State Board of Health which has hitherto supported the views of the Water Board. It is requested that six months or a year be allowed for a trial of the effect of a system of storage in purifying the water. Since the completion of the Walden pond dam, data regarding the quality of the water which it is possible to obtain have not been secured. Moreover, the present plan is to raise this dam 25 feet, increasing the storage capacity of Walden pond to 1,750,000,000 gallons. Later the dam at Breeds pond could be raised, increasing the reserve capacity of that body of water to a nearly equal amount.

### Fresh Water High Pressure System

Seattle, Wash.—City Engineer R. H. Thomson has prepared a plan for an auxiliary system of fire protection to take the place of the salt water mains which were authorized by the City Council three months ago. The scheme is to take a supply from Lake Union, cover a larger territory, and avoid the expense of maintenance due to corrosion in case salt water should be used. A pumping station will be necessary just as if salt water were used and the present plans contemplate the use of electric power for the pumps and an oil engine as auxiliary.

### Quick Change of Water Mains

St. Paul, Minn.—With an interruption in the service of only 45 minutes, the Water Works Department recently cut out 100 feet of old water main supplying the city's low-pressure distributing system, and connected up a new system 34 feet below the level of the old pipe. The work was made necessary by the lowering of the Soo Line railroad doing away with a grade crossing at Mississippi street. The new section of pipe, laid in duplicate, had been placed in a concrete conduit. During the change that occupied 34 hours when the men worked without rest and ate their food while working, the city was supplied with water from the high pressure system. Pressure in the city's pipes dropped only a few pounds, and as no fire occurred during the interval little or no inconvenience was felt.

### State Reservoir Location Selected

Trenton, N. J.—The New Jersey Water Supply Commission has decided in favor of the "Mountain View" in preference to the "Little Falls" location for a water supply. The Commission was largely influenced in its selection by reports of George H. Benzenberg, former President of the American Society of Civil Engineers, and Messrs. Newell and Davis, Chiefs of the United States Reclamation Service. Legislation will at once be prepared to give the Commission authority to construct the lake. The water district will cover all the municipalities of Essex county, parts of Morris, Passaic, Bergen and Hudson counties. The district will be officially known as the Passaic River Water Supply District.



**STREET LIGHTING AND ELECTRIC POWER****New Lighting Ordinance at Dallas**

Dallas, Tex.—A new gas and electric lighting ordinance which has been under consideration a long time has been passed. The principal points of interest are as follows: Gas served shall be of 633 British thermal units at a temperature of 32 degrees Fahrenheit. If the month's average supply shall fall short of the 633 strength the rate charged shall descend in proportion. The rate shall be \$1.35 per 1,000 cubic feet for gas, illuminating or heating, with 10 cents off on all bills paid before the tenth day of the month. On all prepay meters the rate shall be \$1.25. When a test shall develop that the meter shows more gas registered than was actually consumed, the patron shall have his bill scaled accordingly. A consumer desiring a test must deposit 50 cents with the City Assessor; if the meter is found to be incorrect, the 50 cents is returned and a charge of \$1 made against the gas company. The company may obtain an inspection on the same terms.

**Lights Better Than Police**

Denver, Col.—Electric lights are the best policemen Denver has ever tried. Lights have been extended from time to time to the poorly lighted sections on complaints of residents who wished to insure the safety of their homes. Actual experience showed that offenses against the law ceased to such an extent that the number of policemen could be greatly decreased. Recently the system was extended to alleys with the same favorable results.

**Gas for Street Lighting Out of the Question**

Fort Worth, Tex.—That gas for street lighting purposes is out of the question and should not be experimented with, is the opinion of Commissioner Stephens. The lowest bid obtained for gas was \$35 a year or, with three lamps to the block, \$105. Mr. Stephens' plan calls for one arc light on every street corner in the city—900 in all—which, supplied by the city lighting plant, will cost much less and will, he declares, make Fort Worth the best lighted city in the Southwest.

**Municipal Co-operation in Lighting**

Haverhill, Mass.—Mayor Roswell L. Wood recently appeared before the Harbor and Land Commission at Boston to present a petition for authority to lay a cable across the Merrimac river between Haverhill and Groveland, for the purpose of supplying electricity to the latter town. There was no opposition to the plan.

**Municipal Light Project Defeated**

Lafayette, Ind.—Council has voted down the municipal electric light plant project, the vote being 5 to 5. The meeting was attended by 200 citizens. The opposing Councilmen say their stand was taken after a visit to Logansport, Peru, Marion, Bluffton and Muncie, where they claim municipal plants have been failures. The one exception, they say, was at Richmond, and it is too expensive for Lafayette.

**Asks Public for Higher Pay**

San Francisco, Cal.—An interesting change in the municipal life of San Francisco is to be noted in the page advertisements of the gas company in all the newspapers setting forth facts and figures to show that it is entitled to a dollar rate. The present rate is 85 cents, the figure which the ex-Supervisors have confessed they fixed after having been paid \$750 apiece for their votes, they having been elected on a 75-cent gas platform. Now comes the novel course of going before the people with a claim for a higher rate—asking the public that the company be given a "square deal." The increase in the cost of oil from 75 cents to \$1 a barrel is the principal cause of the increased cost of manufacturing gas, but the increase in the cost of labor from an average of 24.26 cents in 1890 an hour to 40.90 cents in 1907, is a considerable item.

**FIRE AND POLICE****Fire Station Plans Drawn by Fireman**

Alliance, O.—Anticipating the action of Council in favor of a sub-fire station for the Mt. Union district, Chief W. S. Aungst has devoted considerable time towards working out a plan. Fireman Ed Held, following the suggestions of the Chief, has made complete detailed drawings, thus saving the city a considerable sum of money.

**Uniform for Macon Police**

Macon, Ga.—At a meeting between Chief Westcott and Chairman Wheeler, of the Police Committee, it was decided to adopt the regulation police uniform and the Stetson hat, known as the Montano. This hat is drab in color, and will be something new for the head covering for the police in Macon, nothing but the regulation police helmet having been worn since the days when the city was policed by a Town Marshal and a big stick. Contracts for the uniforms have been awarded and they will be worn by the men in the annual parade of the peace guardians on April 16.

**New Fire Board of Merit**

New York, N. Y.—Fire Commissioner Hugh Bonner has issued the following new rule governing the roll of honor in the Fire Department:

A Board of Merit is hereby selected, consisting of Deputy Chiefs of the Department Duane and Ahearn, of Manhattan, and Murray, of Brooklyn, to whom will be referred reports of meritorious acts performed by members of the uniformed force for strict inquiry and they will record their findings in each case.

**Gasoline Fire Engine**

Schenectady, N. Y.—An official public test of the new Westinghouse gasoline fire engine was made at Brandywine pond in the presence of a number of fire officials of Schenectady and neighboring cities. The apparatus weighs 4,810 pounds and cost \$2,640. It has a four-inch intake and three regulation 2½-inch outlets. The maximum pressure developed is 190 pounds.

**Aqueduct Police Force Organized**

New York, N. Y.—The new Aqueduct Police Force has been organized with Capt. Rhinelander Waldo as Chief and Capt. Douglass I. McKay as Deputy Chief. Fifty men will be appointed first, the number to be soon increased to 500 and probably within a year to 2,000. The line of the aqueduct from the Catskills to the city line, a distance of 120 miles, will be patrolled. About half of the men will be mounted. The department was organized sooner than was proposed on account of complaints from Peekskill charging that a camp of laborers was responsible for an epidemic of typhoid. The watershed police will serve not only as a sanitary squad but to maintain the peace between the gangs of laborers and the residents of the country.

**Toledo Police Force Reorganized**

Toledo, O.—The reorganization of the police force on an up-to-date, metropolitan scale has gone into effect. For the first time in its history, the force is officered by captains, acting under Chief of Police Perry D. Knapp and assuming some of the duties heretofore assigned to the Inspector. A traffic squad of fifteen picked men is on duty at the principal street intersections downtown. They will be distinguished by a chevron on the sleeve representing the head of a horse encircled by a wheel. The same device will be worn by mounted and motorcycle patrolmen. The six motorcycle men will watch for automobile speeders. The organization now consists of 171 officers and patrolmen—an increase of 36 since a year ago. Mayor Whitlock has issued a letter of instructions, directing, among other things, that no member shall appear in public wearing part of his uniform or with his coat unbuttoned.

### Efficiency and Methods of Youngstown Police

Youngstown, O.—The annual report of Chief of Police W. W. McDowell gives the total number of arrests for the year as 6,110, or 906 more than in the preceding year. The fact that the number of arrests is larger than in most cities of its size is attributed to the efficiency of the police and not as evidence of the wickedness of the city. While it is the general policy to arrest all offenders, special consideration is given to one class, namely, intoxicated persons found in the neighborhood of their residences. These cases are dealt with according to the officer's knowledge of the man and his home conditions—the men being generally assisted to their residences. Participants in street fights, if not arrested in the act, are followed up and arrested on warrants if it is possible to secure evidence. All persons acting in a suspicious manner are arrested.

### Prohibition in Capital City Fire Department

Washington, D. C.—Prohibition is to be adopted within the Fire Department of the District. Chief William T. Belt has recommended to the Commissioners that all applicants for the Department be required to make an affidavit to the fact that they have not indulged in intoxicants six months before the date of filing the application and that each person appointed to the Department be required to sign a pledge to abstain from the use of spiritous liquors for a period of five years from the date of appointment.

## GOVERNMENT AND FINANCE

### Easement Tax

Baltimore, Md.—Not less than \$300,000 will be added annually to the income of Baltimore through the passing by the Legislature of an easement tax bill. The easements referred to consist in the occupation by public service corporations of space in public streets, by the exercise of their franchise rights. Briefly, the method of assessing the easement is to capitalize the profits that have been paid in the form of dividends and deduct from the sum the assessed value of property owned by the corporation. The law applies to all cities of the State.

### Must Establish Sinking Fund

Bay City, Mich.—In accordance with a charter amendment passed by the last Legislature, the sum of \$37,500 will have to be placed in a sinking fund to pay off bonds issued prior to 1905. This sum, collected for twenty years, will pay off the debt of \$1,200,000. Previously, when a debt has fallen due it has been refunded. A theoretical sinking fund has hitherto existed, at least the law provided for it, but there never was any balance left over to put into it.

### City Officials to Consider Union

Birmingham, Ala.—In view of the approaching amalgamation of Birmingham and neighboring cities, Mayor George Ward has called a meeting of Mayors and City Engineers to consider the public works that will be done by each municipality between now and October, 1909. Besides matters of engineering, assessment laws, franchises and long-term contracts will be considered.

### Changes in Boston City Charter

Boston, Mass.—Five bills, all making drastic changes in the charter of the city of Boston, drew an unusually large crowd of politicians to the State House and the hearing before the Committee on Metropolitan Affairs started with Mayor Hibbard and former Mayor Fitzgerald as central figure on the opposite sides of the committee table. Mayor Hibbard was the first speaker in support of his bill, which places the entire government of the city for a year from June 30 next in the hands of the Mayor and Finance Commission. The Mayor said that he had decided that many of the departments of the city government should be consolidated, but that it would take a year to definitely decide on the best method.

### Bay State City Wants Commission

Gloucester, Mass.—The City Council has voted to adopt the recommendations of a committee of citizens and to urge the Legislature of the State to change the charter of the city so as to provide for the appointment of a Commission in place of the present Mayor, Board of Aldermen and Common Council. The proposed plan embodies the election by the people of a Mayor and four Councilmen, to be chosen irrespective of ward lines. A Superintendent of Streets and a Chief Engineer of the Fire Department are also to be elected by the people. The City Treasurer and City Auditor under this plan are to be chosen by Mayor and Council. The resolution unanimously passed the Board of Aldermen, but in the Common Council received a majority of only one vote.

### To Keep Engineer's Time

Cambridge, Mass.—At the meeting of the Aldermen, Alderman Brennan introduced an order requesting the Mayor to submit to City Engineer Hastings a list of thirty-five questions regarding his whereabouts on certain days, and whether he drew his salary as City Engineer on those days.

### Citizens Committee to Determine Salaries

Chicopee, Mass.—To fix the salaries of city employees by referring the matter to a general citizens' committee, is the idea of Mayor Beauchamp. In order to assist in the matter, statistics will be gathered from as many cities as possible of about the same size as Chicopee and governed under similar conditions. The expectation of the Mayor is that salaries may be properly graded so that no readjustment will be necessary for many years.

### State Legislation for the Unemployed

Columbus, O.—Senator Frederic Howe, of Cleveland, proposes to make an investigation of the condition of the unemployed throughout Ohio, and for that purpose has issued special invitation, under the authority of a resolution, to the Mayors of all municipalities to be present at a conference at the Capitol. A committee has been appointed to draft such remedial legislation as will give the cities power to furnish work to the unemployed.

### Increase in Tax Levy

New Bedford, Mass.—An error was discovered in an order adopted by the City Council by which the Assessors were ordered to raise \$131,000 too much. With this error eliminated, the Assessors have to find \$142,837 more than last year. More than half of this increase is occasioned by the much larger amount to be paid as principal and interest of the debt. The total to be raised is \$1,235,621. Last year the city's increase in property valuation was more than \$5,000,000, largely owing to the construction of new mills.

## REFUSE COLLECTION AND DISPOSAL

### Fire Hose vs. Flusher

Knoxville, Tenn.—The budget for the Street Department will include appropriations for a horse sweeper and a flusher. Hitherto streets have been flushed with a hose in the hands of a gang of five men. The hose used was second-hand, but valued at 50 cents. It lasted a very short time. Chief S. B. Boyd last year kept account of the hose and found that the value of hose used up amounted to enough to purchase two flush tanks. The sweeper will be used nights on paved streets.

### Names Hour for Garbage Collection

Newark, N. J.—Since March 1, garbage, ashes and rubbish of all kinds have been collected by the contractor during certain hours designated on cards furnished to occupants of buildings. The periods of collection, ranging from two to three hours, are stamped on the card for the several localities. Instead of having receptacles placed near the curb as formerly, they are now placed within the stoop line. It is asserted that Newark is the first city in the country in which the specified hour for garbage collection has been tried.



#### Will Sprinkle More Streets

Rochester, N. Y.—According to this year's specifications for street sprinkling, 478 streets, or 131.4 miles, will be sprinkled. This is a greater mileage than has ever before been sprinkled. On the basis of last year's bid, the work will cost \$36,000.

#### Protests in Garbage Bids

St. Louis, Mo.—The award of the garbage contract for St. Louis has been postponed, owing to a notification from the attorneys of Charles S. Wheelwright, of New Bedford, Mass., that infringement of patents is claimed against all companies using any continuous or confined process.

#### Improvements in Street Cleaning

Youngstown, O.—A new system of street cleaning will be inaugurated by Director Lionel Evans of the Board of Public Service. All paved streets will be divided into sections and a man assigned to them. Street flushers will be used at night on all the streets in the business sections. In the daytime they will be used on residence streets. For cleaning the gutters of unpaved streets a horse scraper will be used.

#### PARKS AND CITY BEAUTY

##### Park Along Approach to City

Madison, Wis.—Plans for the creation of Brittingham Park have been made by Emil T. Mische for the Madison Park and Pleasure Drive Association, which will be able to carry on the work through the generosity of T. E. Brittingham, who has donated \$17,000 for the purpose. Private owners have co-operated in the work and have filled the land skirting the bay under an agreement that will secure a boulevard extending from the westerly end of the park about a mile to South Madison. In the park itself 70,000 to 80,000 cubic yards of material will be supplied for filling by a dredging company. The deepening of the water along the shore, removing weeds and unsightly growths, is no small part of the improvement. As 90 per cent. of the travel approaching the city passes over tracks crossing the park, the unfavorable impression of the appearance of the city hitherto given to visitors will be changed.

##### Plans for Beautifying Quaker City

Philadelphia, Pa.—Mayor Reyburn, in a recent address, told of plans for beautifying the city in the future, plans for which have been prepared by the Engineering Department. They embrace a gigantic boulevard, stretching from Cumberland street along the Delaware river front to the Schuylkill, and up that stream to Fairmount Park—lines of railroad track along the riverside, abutting on concrete quays and piers—with deep water right up to the pier line.

##### Trees Chosen for Boulevards

Salt Lake City, Utah.—Definite plans for beautifying the city boulevards have been approved by the Park Commissioners. Notices will be sent to all property owners on the streets to be parked, stating the kinds of trees the Board desires planted, and ordering trees not in harmony with the general scheme to be cut down. Definite species have been selected for each street or section of street. The varieties chosen include Norway maple, Western sycamore, European elm and linden, silver and sycamore maple, ash-leaved maple, black elm, Caroline and Bolleana poplar.

#### RAPID TRANSIT

##### City Buys Too Many Rides

Boston, Mass.—Mayor George A. Hibbard has discovered a sort of municipal rapid transit which he proposes to stop. The city has been paying the Boston Elevated Railway Company \$28,000 a year for the past four years for tickets for officials and employees, an equivalent of 1,500 rides a day.

#### Side Doors Near Ends of Cars

New York, N. Y.—The 'quickest and most feasible way of increasing the carrying capacity of the subway and of doing away with the present discomforts of underground travel is to equip the cars with side doors. Bion J. Arnold, Consulting Engineer, recommends that the doors shall be placed not in the middle of the cars, but at the ends, so that they shall be really a continuation of the platform doors, the new doors to be used for exits, the old ones for entrances. Middle doors cannot be advantageously used on account of the curvature of the platforms. Besides, the alterations can be made without loss of structural strength.

#### Would Annul Franchises

Troy, N. Y.—A resolution to oust the United Traction Company from the streets of Troy has been presented to Council and referred to the Law Committee. The resolution is based on the assertion that the company has violated a city ordinance in not running a car at least once every ten minutes over the Oakwood avenue line as required by their franchise. The resolution further directs that legal proceedings be commenced to dispossess the company.

#### MISCELLANEOUS

##### Village Has Big Income

LeRoy, O.—The recently incorporated village of LeRoy has elected without opposition Clark Cheney as Mayor and other officials. The village, with a population of 180, is the seat of the Ohio Farmers' Insurance Company, and has more than \$1,250,000 in property on its tax duplicate. No definite plans for expending the revenue have been made, but a school system, water and lights and other improvements are discussed, which will better and beautify the town.

##### Municipal Theater Pays Profit

Northampton, Mass.—The Trustees of the Academy of Music have made public their annual report, showing for the financial year, which corresponds with the calendar year, a profit of \$2,000. The last two annual reports have shown a total profit of \$5,000, and have done much to justify Northampton's experiment in maintaining a municipal theatre. It is said that there is no other municipal theater in the United States, and when the city got special permission from the Legislature and voted to accept the splendid gift of E. H. R. Lyman, there was no lack of opposition on the ground that the theater would be a source of loss to the city.

##### Curfew for Pittsburg Clubs

Pittsburg, Pa.—Mayor George W. Guthrie has put all the Pittsburg millionaires under a curfew law, and hereafter all clubs must be closed promptly at midnight. At first little attention was paid to the order, but after instructions had been given the police to raid all clubs violating the order they were shut promptly at midnight. At the Duquesne Club, the doors are closed at 12 o'clock and none but members having rooms in the building are admitted; the sideboard is also declared closed at the same time. At the University Club, members are not allowed to remain after midnight. The matter will probably be carried to the courts on the ground that the clubs operate under State charters.

##### Pittsburg Skies Clearing

Pittsburg, Pa.—According to a statement issued by M. H. Rea, Superintendent of the Bureau of Smoke Inspection, in the eight months in which the smoke ordinance has been in operation smoke consuming devices of various types have been installed and are now in use on 290 boilers in about 100 different establishments, and this number is being added to from month to month. Most of these are doing good work, but still better results will be obtained when the firemen realize that on them largely depends smokeless operation.



## LEGAL NEWS

## A Summary and Notes of Recent Decisions—Rulings of Municipal Interest

## EXCAVATION IN STREET—VAULTS

**New York Steam Company vs. Foundation Co.**—Building Code, requiring an owner excavating below ten feet to protect his neighbor's wall, does not apply to excavations in a street. The owner of a steam conduit laid in a street under a city license held not entitled to recover for injuries thereto caused by the settling of the ground owing to the non-negligent driving of sheet piling for the construction of vaults underneath the sidewalk. Under Greater New York Charter, Laws of 1901, a permit for the construction of a vault in a public street for the use of an abutting owner is in the nature of a revocable private easement, which may be revoked when the space is required for municipal or other public purpose. That a public service corporation had obtained a prior license to maintain a steam conduit in a street did not give it a superior right to the street over an adjoining property owner licensed to construct a vault under the sidewalk, extending to the curb line. A license authorizing the construction of a vault under the sidewalk, the walls extending to the curb line, authorized the contractor to drive sheet piling inside the curb line in order to construct the wall.—New York Supreme Court, Appellate Division.

## VALIDITY OF ORDINANCE

**Town of Oceana vs. Cook.**—A municipal ordinance making it "unlawful for any person within" its corporate limits, "by threats, menaces, acts, or otherwise, forcibly or illegally, to hinder, obstruct or oppose, or to attempt to obstruct or oppose, or to counsel others to hinder, obstruct or oppose, any officer in the lawful exercise or discharge of his official duty," and imposing a fine for violation thereof, is not invalid because the offense described is substantially in the terms of section of the Code of 1899 relating to offenses against public justice.—Supreme Court of Appeals of West Virginia.

## DAMAGES—PLACES ALLURING TO CHILDREN

**Brown vs. Salt Lake City.**—Though an owner need not as against an adult intruder or licensee maintain his premises in a reasonably safe condition, yet he must on placing something on his premises which is easily accessible, and which is alluring to children, exercise reasonable care for their safety. Whether a city failing to guard the entrance into a conduit maintained by it as a part of its water works system was negligent and liable for the death of a child passing into the conduit with other children to play, held, under the evidence, for the jury.—Supreme Court of Utah.

## CARE REQUIRED OF TRAVELER

**Bowman vs. Ogden City.**—That a traveler attempted to cross over a ridge about eight inches above the level of the sidewalk left by filling in an excavation, without thinking of it or the danger, which he knew, was not negligence per se.—Supreme Court of Utah.

## STREET IMPROVEMENTS—OBJECTIONS

**Renard et al. vs. City of Spokane.**—A protest filed with a City Council against a proposed improvement nearly two months before the assessment roll was filed with the City Clerk, could not be considered as objections to the assessment roll, required to be filed before the roll is confirmed by the City Council by Laws 1901, in order to authorize a review of such objections by the court, nor were oral objections made at the hearing available for that purpose, the statutory provision requiring written objections being mandatory.—Supreme Court of Washington.

## CITY AS WATER COMPANY

**City of South Pasadena vs. Pasadena Land and Water Co.**—Where a city, pursuant to its authority to acquire a water works system to supply water to its inhabitants, purchases the property, franchise and business of a corporation engaged in supplying water to the inhabitants of a municipality, and the city possesses as an incident to its power to supply water to its inhabitants power to furnish water to others, the city is a "corporation duly incorporated" within the constitution, providing that in any city where there are no municipal water works, any "corporation duly incorporated for such purpose," may lay mains in the streets for supplying water.—Supreme Court of California.

## SEWER CONTRACT—SIDEWALK OBSTRUCTION

**Warden vs. City of New York et al.**—In an action for special injuries from a public nuisance, it appeared that defendant contractors were repairing certain sewers under a contract with defendant city, which provided that the sidewalks and street should be kept clear and free for the passage of pedestrians, carriages, etc., unless otherwise authorized by special permission in writing from the engineer. The sewer was along the north side of a street, and the contractors completely obstructed the sidewalk and part of the street on that side, and placed a large tool chest on the south sidewalk between the curb and the flagged portion, where it remained for some time. The cover of the chest, when open, extended part way over the flagged portion, and plaintiff, an 11-year-old girl, was seriously injured by running into the cover in the dusk of the evening while at play. The permit to open the street provided that the engineer in charge should determine how much of the streets the contractor might occupy; but there was no showing of any permission to occupy any part of the sidewalk. Held, that the obstruction was a nuisance, since the chest was habitually on the sidewalk, and that the jury were not entitled to consider whether placing it there was an incident reasonably necessary to the performance of the contract. Greater New York Charter, Laws 1901, providing that the Board of Aldermen shall not have power to authorize the placing or continuing of any obstruction upon any sidewalk, except the temporary occupation thereof during the erection or repairing of a building on a lot opposite the same, does not authorize city contractors to place a tool chest on a sidewalk while repairing a sewer on the opposite side of the street.—New York Supreme Court, Appellate Division.

## STREET RAILROAD FRANCHISE

**Village of Phoenix vs. Gannon.**—The authority to use the public streets for railroad purposes is a franchise proceeding from the State, and the municipality has no power in respect thereto, except as expressly given by statute. Held, under Railroad Law, Laws of 1890, a municipality has no power to give a consent or franchise to an individual to operate a street-surface railroad upon its streets.—New York Supreme Court, Appellate Division.

## CITY LIABLE FOR SLIPPERY SIDEWALK

**Powers vs. Village of Moravia.**—In an action for injuries from slipping on a sidewalk, evidence held to sustain a verdict for plaintiff on the theory that defendant was negligent in permitting a sluiceway to become clogged and force surface water to flow across a sidewalk, where it froze. Plaintiff, a married woman, earning \$5 or \$6 a week working out in families, besides doing her home work, sustained a Colles fracture of her right wrist, suffered great pain for several months, carried her arm in splints for about ten weeks, and bandaged it for three or four weeks more. The bone united, but there was some deformity, the hand was weakened, the fingers stiffened, she was unable to do any outside work for seven months, and her earning capacity was permanently diminished. Held, that a verdict for \$2,000 was not excessive.—New York Supreme Court, Appellate Division.

## NON-ACCEPTANCE OF BID—DAMAGES

**Molloy vs. City of New Rochelle.**—New Rochelle Charter, Laws of 1899, provides that in case of improvements costing over \$200 the city shall advertise for bids, and that the contract shall be let to the lowest responsible bidder. Defendant asked for bids for the grading of city streets, reserving the right to reject any or all bids. Plaintiff, who was then solvent and qualified to do the work, filed the lowest bid, but it was rejected, and the contract let to the next highest bidder. Held, that plaintiff could not recover damages from the city for loss of profits by the city's wrongful conduct in failing to award the contract to him.—New York Supreme Court, Appellate Division.

## FIRE DEPARTMENT—INSURANCE PREMIUMS

**Continental Hose Co. vs. City of Fargo.**—In an action by a fire company to recover from a city its proportionate share of the premium received on fire policies under Revised Code 1905, plaintiff must show that it had the management of at least one fire engine, hook and ladder truck or hose cart. Fire Department held to have no such management of the apparatus as is contemplated by Revised Codes 1905, so as to entitle it to a share of the fund received from insurance premiums. Evidence held to show that fire department was a paid Department within Revised Codes 1905.—Supreme Court of North Dakota.

**DEFECTIVE SIDEWALK—COMPLAINT**

**City of Huntington vs. Staver.**—A complaint alleged that on and prior to January 22, 1905, for the purpose of travel, board walks were placed along the south end of a street in defendant city, which walks were under the city's control; that it permitted and suffered the sidewalk to become out of repair and dangerous for travel thereon, and suffered some of the boards to become loose and removed from the walk; that it had notice of the dangerous condition, and neglected to have the same repaired, but permitted the condition to remain; and that plaintiff, after dark, while passing along the street, stepped into an opening in the walk, caused by the removal of the boards, causing his injury, etc. Held, that the complaint was sufficient to enable a person of common understanding to know what was intended, as required by Burns' Annual Statutes, 1901, and was therefore not demurrable.—Appellate Court of Indiana.

**STREET IMPROVEMENT—TAXBILLS—VALIDITY**

**City of Marshall ex rel Colyer et al. vs. Wisdom et al.**—Where a city authorizing a street improvement to be completed within 90 days from the time the contract therefor takes effect, to be paid for in special tax bills, delayed for 11 months after the contract was awarded to the lowest bidder the execution thereof, the tax bills, in the absence of evidence explaining the delay, were invalid, under Revised Statutes 1899, section 5989, providing for street improvements under contracts on plans and specifications, etc., for want of jurisdiction to proceed.—Kansas City Court of Appeals.

**DEFECTIVE SIDEWALK—NOTICE OF INJURY**

**Jacobs vs. City of St. Joseph.**—The Revised Statutes of 1899 requires notice of claims for injuries on defective sidewalks to the mayor of cities of the second class, stating the place where, the time when, such injury was received, and the character and circumstances of the injury. Held, that a notice reciting that plaintiff fell and sustained great injuries on a broken board in a sidewalk at a specified time and place was fatally defective for failure to describe the character of plaintiff's injuries.—Kansas City Court of Appeals.

**DEFECT IN UNACCEPTED STREET**

**City of Bessemer vs. Carroll.**—The court will take judicial notice of the provisions of the charter of the city of Bessemer. Though the duty to repair its streets is not expressly imposed upon a city, where the power is conferred upon it by charter to establish, grade, improve, and exercise exclusive control over the public streets within its limits, it will be liable for its negligent failure to make proper repairs, unless relieved of such liability by its charter provisions or otherwise. The charter of the city of Bessemer authorized the city to establish streets, etc., to remove obstructions from streets, and to open, alter, grade, pave, etc., all streets, but provided that it should not be liable for its failure to exercise these powers. Plaintiff was injured because of a defect in a street not established by the city, and over which it had never exercised any of the powers conferred by its charter. Held, that the city was not liable for its failure to repair the street, since its liability for defects in its streets was limited by charter provisions to those streets over which it had assumed and actually exercised some of the powers conferred upon it therein. The enactment of the provision relieving the city from liability for its failure to exercise the charter powers conferred upon it was a proper exercise of legislative power.—Supreme Court of Alabama.

**RELOCATING WATER MAIN**

**Kelsey vs. City of New York et al.**—A city, in relocating a water main, to permit the building of a rapid transit station, is not liable for a failure to select the best possible route or to adopt the best possible plan of construction, if those selected were reasonably safe. In an action against a city for damages resulting from a bursted water main, it was improper for plaintiff's counsel to bring before the jury the fact that the city and the contractor, who was a party defendant, were indemnified by a bond from the subcontractor, who did the work, justifying reversal on appeal.—New York Supreme Court, Appellate Division.

**SMOKE ORDINANCE**

**City of Chicago vs. Knobel.**—In an action against a manager of a building to recover for the violation of a municipal smoke ordinance, imposing a discretionary fine, evidence that the heating plant was of the most approved type and that the owner had done all that human skill could devise to prevent smoke from escaping from the stack is admissible in mitigation of the penalty.—Supreme Court of Illinois.

**LUNCH WAGON IN STREET**

**Commonwealth vs. Morrison.**—Under Revised Laws, defining hawkers and peddlers as persons who travel about either on foot or in wagons, carrying and exposing for sale goods, a hawker's and peddler's license issued by the Street Department and the Board of Health of Boston conferred no authority on defendant to maintain a lunch wagon in a street daily from 6 p. m. to 5 a. m. Statute 1878 authorized the appointment of a Board of Police Commissioners for Boston, and empowered the Council to confer on the Board all the powers of the Aldermen in relation to regulating hawkers' and peddlers' carriages, wagons, and other vehicles, etc. Revised Ordinances, Boston, also provided that the Board of Police Commissioners should exercise all the powers conferred on the Board of Aldermen with reference to regulating hawkers' and peddlers' carriages, wagons, and vehicles; the same provision being carried forward in Ordinances 1895, which power was transferred to a board of police created by Statutes 1885. Held, that a person operating a lunch wagon at night in a street could only justify his occupation of the street by a license from the Police Board; the Board of Aldermen having no jurisdiction to grant such a license. The easement of the public in the use of a street is coextensive with the limits of the highway, the fee of which remains in the landowner, who may make any use of it not inconsistent with the rights of the public. The public's easement in a street includes every reasonable means of transportation for persons, commodities, or intelligence which the advance of civilization may render suitable for a highway, embracing a use for gas and water pipes, sewers, telephone, telegraph and electric light and power poles, wires, and conduits, electric and horse railways, subways, and private railroads. The maintenance of a lunch wagon in a street daily from 6 p. m. to 5 a. m. constituted an unlawful obstruction of the street.—Supreme Judicial Court of Massachusetts.

**CATTLE IN STREETS**

**Coreil vs. Town of Welsh et al.**—Under its police power as conferred by the first charter of the town, it had the right to adopt an ordinance with the view of putting an end to the nuisance committed by horned cattle running in the town. The amendment of the original charter is considered as binding, although the whole amendment was submitted to the electors and adopted as one amendment, and although it was not specially numbered. Besides, the objection in argument has but little force, in view of the fact that the question is not raised in the pleadings. Under both the original charter and the amendment there was a delegated authority in the town sufficient to authorize it to adopt the ordinance attacked. The town has authority to defend itself against nuisances, not the least of which are cattle running through the streets, squares, and other public grounds.—Supreme Court of Louisiana.

**POLICE OFFICER—CHARGE OF ASSAULT**

**People ex rel. Clinton vs. Bingham, Police Com'r.**—Evidence held insufficient to sustain a Police Commissioner's finding that relator, a patrolman, was guilty of conduct unbecoming an officer, in that he had assaulted a fellow officer, so as to justify his discharge. That relator, a police officer, came between complainant and another officer who was assaulting him, whether for the purpose of separating them or not, did not constitute an assault by relator on complainant.—New York Supreme Court, Appellate Division.

**POWER TO LICENSE**

**City of Louisville vs. Roberts & Krieger et al.**—Act approved March 21, 1906, repealing Kentucky Statute 1903, providing for licensing of the businesses, occupations, and professions therein named by cities of the first class, and section 3012, providing for the licensing of any business, etc., not named in section 3011, and enacting in lieu thereof that the council may provide for the licensing of any business, trade, calling, occupation, or profession, etc., does not narrow the right to license, but extends it.—Court of Appeals of Kentucky.

**INTERFERENCE WITH STATE INSTITUTIONS**

**City of Fulton vs. Sims.**—An ordinance establishing public scales and declaring that coal, etc., shall not be sold without being weighed thereon is inapplicable to require one selling coal to a State institution, located within the corporate limits, to first have the same weighed on such scales; the city being without authority to interfere with the purchases, which Revised Statutes 1899 authorizes the institution to make.—Kansas City Court of Appeals.



## NEWS OF THE SOCIETIES

**Washington Society of Engineers.**—

At the smoker given by the society, March 3, at Fritz Reuter's, Robert Farnham, Jr., Assistant Engineer of Construction of the Pennsylvania Railroad, described the railroad improvements in the District of Columbia, made necessary by the establishment of the new Union Station. About \$28,000,000 has been spent, and \$7,000,000 more will be required to complete the plans. Of this amount, \$12,360,000 was spent on terminal property, including the station and approaches. One of the interesting points brought out in the questions after the lecture was the method of signaling for the starting of a train. When the conductor has all his passengers aboard and the time has come for the train to start he inserts a key in the signal switch. That notifies the man at the gate leading to that specific train and the first signal tower on the line that the train is ready to be off. Then the signal tower sends a flash, shown by a light, that the track is clear for the train. The gateman thereupon sends a signal that all the passengers for the train have passed through the gate. This gives the gateman the last say in starting a train. The system is a unique one, it was stated, but is expected to work well. A new system of lights now used on the local operating system was also explained. Under it the white light is not used at all. A yellow light signals clear, a green light caution and red danger. This change was made because it was found that under the old system when a light globe is broken, whether red, green or white, the light shows white and thus clear. Under the new system, a white light is as much a signal of danger as a red one, and thus the dangers from broken globes are reduced to a minimum. At the next meeting of the society, to be held March 17, at the Hubbard Memorial Hall, Calvin W. Hendrick, Chief Engineer of the Sewerage Commission of Baltimore, Md., will speak on the sewerage work in that city.

**Municipal Art Society.**—At the annual banquet of the society at the National Art Clubs, 15 Gramercy Park, the President, William I. Coombs, presided. Commissioner H. B. F. Macfarland, of Washington, D. C., delivered an address on "Municipal Art in the National Capital." He described the plans of the city, the selection of the site by George Washington, the development of the plans by L'Enfant, the work of Alexander R. Shepherd in putting the streets in shape and of the part taken by the Senate Park Commission of 1900. Mr. Macfarland spoke of the work still to be done, the extension of streets, acquisition of park lands, the improvement of Anacostia river and Rock creek, the addition of statues and foundations, and the more harmonious placing of public buildings, as has been planned.

**City Clerks of New York State.**—City Clerk Frank L. Fonda, of Schenectady, N. Y., has received replies from the Clerks of nine cities favoring his plan to organize a City Clerks' Association of the State of New York, and expressing their desire to co-operate in every way to assure the success of such an association. Those who have responded are: H. B. Sommer, North Tonawanda; J. G. Salt, Rensselaer; Frederick Bresler, Albany; Clerk Delaney, Troy; J. S. Hanlon, Auburn; W. O. Kerr, Ithaca; E. S. Dalton, Cortland; Thomas J. Halset, Amsterdam; William J. Elliott, Cohoes.

**Association of Ohio Contractors.**—A meeting of Ohio contractors interested in municipal work was held February 21 at the Southern Hotel, Columbus, O., to consider organizing a State association for the purpose of promoting good roads and good streets and securing many necessary reforms in connection with public work. Wide variance exists at present regarding specifications and plans in various municipalities and the conditions under which competitive bids are asked. One of the principal objects of the proposed organization is to secure more uniform specifications throughout the entire State. Many specifications, as now drawn, force hardships upon the contractor and extra expense upon the property owners because of obsolete clauses which the contractors feel can be readily eliminated by organized effort. Most municipal work is conducted under supervision of officials who are being constantly changed because of political preferment. The average tenure of office of the city official having charge of public improvements is too short to enable him to become experienced in this line of work and also put into effect changes which experience may deem advisable. The municipal contractors alone continue constantly employed in improvement work, but individually they are enabled to accomplish but little, while through an organization they expect to be able to accomplish much. As a result of this meeting, the Ohio Association of Contractors was organized, with headquarters at Columbus. The following named officers were elected: President, Col. N. B. Abbott, Columbus; vice-president, F. H. Kirschner, Cincinnati; secretary and treasurer, George B. McGrath, Cleveland. Trustees: James E. Conlev, Dayton; Edward Kelly, Portsmouth; William I. Wildes, Akron; Philip Garrigan, Toledo; Oliver Rieley, Cleveland; L. A. Fauver, Elyria; Thomas J. Mulligan, Lima; William M. Graham, Columbus; William H. Adams, Zanesville.

**Ye Village Improvement Society of New York.**—This society, organized in 1660 and reorganized in 1908, for the purpose of securing a more beautiful city, has addressed the following communication, which is signed by Ralph W. Reinhold, Henry W. Gardner and A. A. Stephens, the publicity committee, to the Mayor, Board of Aldermen and Building Departments of Greater New York:

The undersigned, owners or tenants of residential property in this city, desirous of making and maintaining the rear areas of their respective homes attractive and homelike as possible, do hereby respectfully protest against the further erection of pulley line clothes poles for tenement house use, except by special permit. These ungainly poles, from which radiate a network of pulley lines, often hung with a nondescript assortment of the family wash, rugs, and clothing, are unsightly, unsanitary, dangerous to life and limb, as numerous accidents prove, and are an impediment to firemen in case of fire. It is a primitive, makeshift custom, that lessens property values, especially in private residential sections, by giving the neighborhood a cheap, tenement house outlook, to the detriment and loss of neighboring owners and tenants.

One of the most earnest of advocates of the abolition of the clothes pole and pulley line is Fire Chief Croker. He says that in fires in the tenement house section the firemen are fearfully handicapped by the poles and pulleys. Many lives have been sacrificed and much property destroyed because the poles or lines prevented the prompt raising of ladders and hose. In

some cities the clothes pole and the pulleys are recognized as so great a menace that they are prohibited by law. Modern ingenuity has provided substitutes for the ungainly pulley poles that are practical, neat, easily reached, and safe. We respectfully request that this matter be investigated and an ordinance passed regulating the further erection of pulley line poles, also condemning those in use that from any cause are unsafe and liable to fall.

**Charity Organization Society.**—Congestion of population, increasingly recognized as one of a few basic causes of modern city problems, is dealt with at the exhibit which is being held at the American Museum of Natural History, New York City, March 9-22. A four-day program will be illustrated by charts, models, photographs, moving pictures and other graphic devices for bringing home overcrowding to-day in New York, and the denser overcrowding which may be expected. The exhibit will consider congestion from its causes, its facts, its alleviations and its preventions. It will try to show how New York is overcrowded from the influx of people from the country and through Ellis Island, the resulting housing and transportation difficulties, land values, rents, and manner of living; it will show what alleviations there have been under the present tenement house law; it will make plain the fact that large sections of Manhattan are crowded with factories which naturally hold their employes near them in unfit dwellings; it will contrast sections of the greater city in which the population is about three persons to the acre, but which are practically inaccessible by present transportation methods or by any which are now definitely planned. At the opening meeting at 8:15, March 9, President John H. Finley of the College of the City of New York, presided. The speakers were Governor Hughes, Commissioner Darlington of the Health Department, Commissioner Heberd of the Department of Public Charities, Mrs. V. G. Simkhovitch, headworker of Greenwich House, and Baron Mayor des Planches, Italian ambassador to the United States. The presence of the Italian ambassador indicates the interest of his government in the exhibit.

Tuesday morning, March 10, Gaylord S. White, headworker of Union Settlement, presided over a special meeting of the Neighborhood Workers' Association at which George W. Goler, M. D., health officer of Rochester, spoke on the Opportunities of a Commissioner of Health; Joseph Lee of Boston on Congestion and Play; Howard Bradstreet, secretary of the Metropolitan Parks Association, on Physical Development of Children in Congested Districts; the discussion was opened by Robert W. Bruere, general agent for the Association for Improving the Condition of the Poor, and Dr. Arthur Shoemaker. Tuesday afternoon, Robert Watchorn, Commissioner of Immigration at Ellis Island, presided over a meeting on Home Conditions in Congested Districts; Dr. Lee K. Frankel, manager of the United Hebrew Charities, spoke on "What Private Charity Should Do to Disperse Those Who Live in Congested Districts"; Leonard G. Robinson, general manager of the Jewish Agricultural and Aid Society, spoke on "The Jew and the Land"; Dr. Antonio Stella, representing the Society for Italian Immigrants, on How Congested Conditions Affect the Italian Woman and Child; Gino C. Speranza, on The Industrial and Civic Relations of Italians in Congested Districts; Miss Amy G. Bernady of Smith College on Distribution of Italians in the United States. Professor Morris Loeb of New York University opened the discussion.



**Municipal Art Association of Indianapolis.**—A report in favor of the proposed extension of the Fall creek boulevard, from Capitol avenue to Northwestern avenue, has been received by Charles C. Brown, President of the Municipal Art Association, which was organized within the Commercial Club, from C. A. Kenyon, as Chairman of the Park Committee of the association. The board of directors of the Commercial Club has passed resolutions to the effect that the members heartily approve of the action of the Mayor and the city authorities in their proposed movement for the preparation of plans looking to the completion of the Fall creek boulevard and park enterprise, and the proposition to begin work as soon as practicable, to give employment to the unemployed. The resolution pledged the co-operation of the Commercial Club to the enterprise, and it was further resolved "that the Municipal Art Association, which was organized within the club, to give assistance to this and similar movements, be asked to tender its services in this behalf."

**Institution of Civil Engineers.**—At the ordinary meeting of the society in London, England, on February 25, a paper was read by William Barclay Parsons on "The New York Rapid Transit Subway."

**City Club of Cincinnati.**—At a recent meeting of the club, J. O. White presented the report of the Committee on Tenement Houses, and it was voted to urge the adoption of the ordinance on that subject now pending before Council. The ordinance was carefully prepared as long ago as August, 1906, and since then has been revised. It provides for the minimum requirements of air, light, sanitation and fire protection, with a view to preventing possible discouragement to building. The ordinance has been indorsed by leading architects and charity workers, including A. O. Elzner, George W. Rapp, G. W. Drach, J. G. Steinkamp, S. S. Godley, Max Senior, R. L. Melendy and C. M. Hubbard.

### Calendar of Meetings

March 4-27.

**Municipal Art Society of New York.**—Seventh annual exhibition. Galleries of the National Arts Club, 119 East Nineteenth street, New York City.—Secretary, 119 East Nineteenth street.

March 9-22.

**Charity Organization Society.**—Exhibit of Congestion of Population. American Museum of Natural History, New York City.—Edward T. Devine, General Secretary, 105 East Twenty-second street, New York City.

March 11.

**New England Water Works.**—Regular March meeting, Hotel Brunswick, Copley Square, Boston, Mass.—Willard Kent, Secretary, 715 Tremont Temple, Boston, Mass.

March 18.

**American Society of Civil Engineers.**—Regular meeting at the House of the Society, 220 West Fifty-seventh street, New York City.—Charles Warren Hunt, Secretary.

May 11-16.

**American Water Works Association.**—Twenty-eighth annual convention, Washington, D. C.—J. M. Diven, Secretary, 14 George street, Charleston, S. C.

June 23-26.

**American Society of Civil Engineers.**—Annual convention, Denver, Col.—Charles Warren Hunt, Secretary, 220 West Fifty-seventh street, New York City.

June 23-26.

**American Society of Mechanical Engineers.**—Annual convention, Detroit, Mich.—C. W. Rice, Secretary, 29 West 39th street, New York City.

June 23-27.

**American Society for Testing Materials.**—Annual meeting, Hotel Traymore, Atlantic City, N. J.—Theodore Marburg, Secretary, University of Pennsylvania, Philadelphia, Pa.

### PERSONALS

**BATES, ELI,** Chief of the Fire Department of New York City from 1873 to 1884, who, since his retirement, has lived in Hoboken, N. J., was married in that city recently to Mrs. Nellie McBride. Mr. Bates is 82 years of age and his bride 47.

**BLAKE, E. M.,** Civil Engineer, Boston, Mass., has recently associated with him Henry A. Symonds, under the firm name of Blake & Symonds, and they will give their attention to sanitary, hydraulic, municipal and gas engineering, with office at 8 Beacon street, Boston.

**CALKINS, ALBERT S.,** Assistant City Engineer of Joliet, Ill., for fifteen years, has been removed by Mayor John R. Cronin for political reasons, and James Bannon, a graduate of the University of Illinois, has been appointed to assist City Engineer H. A. Stevens.

**CARNOCK, FRED R.,** City Engineer of Medford, Mass., has been reappointed.

**CLEVELAND, CHARLES F.,** Chief of Police of Utica, N. Y., and vice-president of the State Association of Police Chiefs, died recently and M. F. Brophy is Acting Chief.

**CLOUGHEN, JOHN,** a contractor at 213 Avenue C, New York City, has been appointed by Borough President John F. Ahearn, of Manhattan, as Commissioner of Public Works of the borough, salary \$6,000 per annum, to succeed Henry S. Thompson, resigned.

**COPELAND, WILLIAM R.,** Division Engineer, Bureau of Filtration, Pittsburg, Pa., has been appointed Bacteriologist and Chemist at the Columbus, O., water purification plant.

**CORCORAN, C. J.,** City Clerk of Lawrence, Mass., was married recently to Miss Nellie M. Halliwell.

**FERGUSON, GARWOOD,** of Salamanca, N. Y., formerly of Paterson, N. J., has been elected County Engineer of Passaic County, N. J., to succeed Colin R. Wise, resigned.

**FREDLOCK, DR. A. M.,** Mayor of Elkins, W. Va., has been re-elected on the liquor license ticket.

**JOYNER, W. R.,** Mayor of Atlanta, Ga., recently returned from a trip to Arkansas, where he first attended a meeting of the Southern League of Baseball Clubs, of which he is a member, at Little Rock, after which he spent a few days recuperating at Hot Springs.

**MANN, E. P.,** Mayor of Troy, N. Y., is on a trip South and is expected to return about March 23. Under the charter the President of the Common Council is Acting Mayor during his absence.

**MAXWELL, M. B.,** Mayor of Eveleth, Minn., dropped dead recently in his home.

**MEALS, DR. EZRA SAMUEL,** Harrisburg, Pa., has been elected Mayor of the City over W. B. Miller and J. Henry Spicer; other Pennsylvania cities elected Mayors as follows: Allentown, ex-State Senator Harry G. Stiles over former Mayor Fred E. Lewis; Altoona, S. M. Hoyer over G. W. Kuebler, President of the Board of Public Works; Chester, S. M. Johnson over John J. Buckley; Easton, Henry McKean over Charles Arner; Carbondale, Abram L. Sabin over James J. O'Neill; Erie, Michael Liebel, Jr., re-elected over James D. Johnson; Franklin, John P. Emery, re-elected; Johnstown, Wilston over Tomb; Lancaster, J. P. McCaskey, re-elected over Charles M. Howell; Lebanon, George B. Marquart; New Castle, Henry J. Luck over six opponents; Reading, William Rick, over Edward Yeager; Titusville, R. E. Dickinson over J. M.

Critchelow; Wilkes-Barre, Louis P. Kniffen, over Dorrance Reynolds; Williamsport, Charles D. Wolfe over James Mansel; York, Jacob E. Weaver.

**MILLS, WALTER S.,** Chief of Police of Lima, O., since 1901, when he was promoted from patrolman, has tendered his resignation to Mayor Fred C. Becker and will retire to his farm in Amanda township, where he has invested \$10,000 in a modern dairy equipment.

**NEILSON, ROBERT B.,** Councilman of Auburn, Wash., has been unanimously elected Mayor by the City Council, to succeed A. H. Meade, resigned, and Ex-Councilman J. B. Seavey, father of the city's new water system, has again been elected to the Council.

**OHL, VAN E.,** City Engineer of Ensley, Ala., has been re-elected by Council; James Merriman, Chief of Police; J. Acuff, Sanitary Officer; Dr. J. E. Robbins, City Physician; N. H. Davis, Tax Collector and Treasurer, and A. L. Arnold, City Clerk, while F. G. Moore has been elected City Attorney to succeed Romaine Boyd.

**RUSSELL, S. BENT,** Consulting Civil Engineer of St. Louis, Mo., has been appointed Chief Engineer and Superintendent of Water Works at Louisville, Ky., at a salary of \$7,500, to succeed the late Charles Herman; Mr. Russell is 48 years old, and for twenty years prior to 1902 was connected with the Water Department of St. Louis, Mo.

**SHAW, E. L.,** formerly City Engineer of Marinette, Wis., has opened an office in the Monadnock Block, Chicago, Ill., where he will engage in a consulting practice, making a specialty of bridges, buildings, foundations and municipal work.

**SEWELL, JOHN STEPHEN,** Major Corps of Engineers, U. S. A., has resigned from the army and entered into private practice; Maj. Sewell was graduated from the Military Academy in 1891. His principal assignments in the government service were the construction of the new Government Printing Office and of the War College, both at Washington, D. C.

**SHEDD, ALBERT,** Mayor of Nashua, N. H., recently celebrated his 70th birthday, and was presented with a bunch of 70 jacquemint roses by Tax Collector Henri T. Ledoux on behalf of the city officials, including police and firemen.

**TURNER, O. A.,** City Engineer of Phoenix and Mesa, Ariz., has been appointed City Engineer of Tempe, in the same State.

**WALKER, WILLIAM H.,** Superintendent of Public Buildings and Offices of the Borough of Manhattan, New York City, has been removed by Borough President Ahearn and John R. Voorhis appointed to fill the vacancy.

**WEATHERFORD, HEISKELL,** has been elected City Engineer of Memphis, Tenn., without opposition and will ask for a reorganization of the department.

**WILCOX, RALPH M.,** formerly City Surveyor of Middletown, has been elected again by Council over E. P. Augur, who has held the office during the term of Mayor Fisher for the past two years, by a vote of 8 to 7; Charles Hamlin has been chosen Sealer of Weights and Measures over Thomas F. Griffin; Gustaf B. Carlson has been elected City Attorney, a position abolished under Mayor Fisher, and will receive a salary of \$200 a year in addition to pay for all his appearances in court; Richard Commerford has been re-elected Street Commissioner, salary \$1,000 per year.

## TRADE NOTES

**Cast Iron Pipe.**—Birmingham—In spite of reduction in pig iron quotations, prices of water pipe are firmer. Specifications were received last week to cover about 15,000 tons for eastern points. Quotations: 4 to 6-inch, \$28; 8 to 12-inch, \$26; over 12-inch, \$25, with \$1 extra for gas pipe. San Francisco—Quotations: 4-inch, \$39; 6, 8, 10 and 12-inch, \$38. New York—Car-load lots of 6-inch, \$25 to \$25.50 per ton.

**Pig Lead.**—Prices unchanged. 3.75c., New York; 3.65c., St. Louis.

**Water Companies Fail.**—United States Judge Edmund Waddill, Jr., Norfolk, Va., recently appointed John B. Focke of Newport News and J. J. Dekinder of Philadelphia receivers under bond of \$10,000 each for the Peninsula Pure Water Co. and the National Water Supply Co., financed together for the construction of a water works plant to supply the city of Newport News, towns of Hampton and Phoebus and Government reservation in the counties of Elizabeth City and York, Va.

**Brick Freight Rates.**—No compromise has been effected between the fire brick and paving brick interests. From indications there will be a merry row for some time over the ruling of the Interstate Commerce Commission that a "brick is a brick." The paving brick interests will soon have a chance to have their complaint heard. They will endeavor to show the Commission that it erred in its finding that there should be no difference in brick rates. As a result of the ruling paving brick is being hauled at 2 1-2 cents per 100 higher, eastbound, railroads having reduced fire brick from 25 cents to 22 1-2 cents and raised paving brick up from 20 cents per 100. Westbound brick rates are not to be disturbed.

**Gasoline Fire Engine.**—A special test of the new gasoline fire engine manufactured by the Westinghouse Agricultural Company, Schenectady, N. Y., was held recently at Station No. 4, in Nott street, Schenectady, N. Y. A number of out of town fire officials were in attendance. The test was satisfactory in every detail to the visitors. Those from out of town who witnessed the test were: Chief Briggs, of Rome; Chief Byron, Deputy Commissioner McKean and Engineer Smith, of Troy; Chief Collins and Commissioners Murphy and Beebe, of Cohoes, and Fire and Water Engineer Campbell and Mr. Stewart, of New York City.

**Venezuelan Asphalt Troubles.**—The first suit of the government against the New York and Bermudez Asphalt Company for the annulment of the company's charter came to an end when the High Federal Court of Venezuela handed down a judgment approving the assessment of \$200,000 because the company has failed to fulfil the terms of its contract.

**Fire Engine Plant Abandoned.**—The American La France Fire Engine Company, Elmira, N. Y., has abandoned its plant on Webster street, Cincinnati, O., where for more than half a century fire engines have been built. During part of that time the building was occupied by the Ahrens company until they joined the La France company. A few years ago the Ahrens withdrew and started a new business. The American La France company is consolidating its Cincinnati and Seneca Falls plants into a large plant at Elmira, N. Y.

## PATENT CLAIMS

879,890. **Distance-Lighting Gas-Burner Device.** Richard N. Oakman, Brooklyn, N. Y. Serial No. 379,643.

In a distance lighting burner device, a valve chamber having ports communicating with the longitudinal gas passage, said chamber being closed and free from vent at the rear end beyond said ports, in combination with a solid reciprocating piston to close the ports when its body covers them and to open the ports when its end has passed beyond them in the chamber, and means for applying fluid pressure or exhaust in the chamber.

879,913. **Prepayment Arrangement for Meters.** Henry W. Sayles, Peoria, Ill., assignor, by mesne assignments, to George M. Willis, Chicago, Ill. Serial No. 290,133.

The combination with the movable element and pressure current circuits in a meter, of prepayment mechanism for controlling said circuits, electromagnetic mechanism for the prepayment mechanism included in the pressure circuit for controlling the current circuit, contact mechanism for controlling the pressure circuit, two contact-members for said contact mechanism, one of said members being associated with the coins passing through the machine and the other member being in driven connection with the movable element of the meter, clutch mechanism between the contact members adapted to allow slight relative movement between said members independently of the movable element, means for normally holding said contact members in electrical engagement to close the pressure circuit whereby the electromagnetic mechanism therein is controlled to open the current circuit, and means upon engagement of coins with the one contact member for causing disengagement of said members to open the pressure circuit whereby the electromagnetic mechanism is controlled to close the current circuit, both contact members being then driven upon movement of the movable element.

879,929. **Automatic Spraying Device.** William Tyree, Nelson, New Zealand. Serial No. 378,850.

An automatic spraying device comprising a receptacle adapted to contain the fluid to be sprayed, a carbide chamber in said receptacle for the generation of acetylene gas, a water chamber, a valve in said pipe and means for operating the valve from the exterior of the receptacle.

879,970. **Road-Grader.** John V. Kruse, Virginia, Ill. Serial No. 357,622.

In a road grader, the combination of a scraper, a disk mounted in cooperative relation to the scraper, and means for moving the disk into and out of operative position.

880,066. **Concrete Sidewalk-Block.** Charles Deeg, Madison, Wis., assignor of one-third to Peter Weiler and one-third to Charles H. Fix, Madison, Wis. Serial No. 386,532.

A cement sidewalk block comprising a flat body-portion having parallel lateral oblique-faced ends, matched grooves in the oblique faced ends, the grooves being adapted to receive locking-pins, longitudinal stringers depending from the body-portion of the block at right-angles to said oblique-faced ends, and stringer end-extensions projecting beyond said body-portion, the opposite ends of the stringers being cut-away for a distance equal to the length of the end-extensions.

880,124. **Street-Cleaning Apparatus.** Charles H. Butler, Oakland, Cal. Serial No. 229,266.

In a street cleaning apparatus, the combination of a wheeled-vehicle-frame, a rotary brush carried thereby, a casing for said brush, an endless conveyor extending upwardly and forwardly and traveling in a passage-way formed in the vehicle frame, a receiving chamber for the material lifted by said conveyor, an air trunk intersecting said conveyor passage-way, air induction means in said air trunk cooperating with the brush to cleanse the roadway, said air-trunk extending forward of the vehicle, settling tubes connected with the air trunk, a conveyor receiving the collections from said settling tubes, a receptacle into which said conveyor discharges, means for rotating the brush and means for operating said air induction means.

880,303. **Bucket Elevator.** Frederick A. Hetherington, Indianapolis, Ind. Serial No. 370,350.

The combination, with an elevator-casing, of a pair of supporting-wheels mounted one in each end thereof, a pair of journal bearings for the shaft of one of said wheels, a tubular sleeve carried by each of said journal bearings substantially at right angles to the bearing, a compression spring mounted in said sleeve, and an adjustable abutment mounted on the casing and adapted to enter said sleeve and have a relative longitudinal movement therein against the spring.

880,312. **Street or Roadway Structure.** Nathaniel Lafon, Red Jacket, W. Va. Serial No. 372,102.

In a road structure, a suitable base, a surface laid thereon, channeled stringers laid

end to end and receiving and interlocking with the side edges of the road surface, transverse ties extending through the bed in line with and between the junction ends of the stringers, and couplings interlocking with and connecting the ties with the stringers and also the junction ends of the latter.

880,392. **Street-Cleaning Machine.** Otto Neukirch, Cincinnati, Ohio. Serial No. 312,319.

In a street sweeping machine a bed mounted upon transporting wheels, uprights rising from said bed and having cap plates at their upper ends, screw-threaded rods operating through said cap plates and having nuts bearing upon the latter and provided with eyes at their lower extremities, cross bars engaging said eyes and operating in slots in the uprights, a flanged floor or conveyor bed supported upon the cross bars, brackets connected adjustably with said floor near its upper and lower ends, shafts journaled in said brackets, an endless broom supported upon said shafts, and means for transmitting motion to the latter from one of the transporting wheels of the machine.

880,463. **Gate-Valve.** Andrew G. Paul, Boston, Mass., assignor to Pakin Company, a Corporation of New York. Serial No. 681,128.

In a gate valve, comprising a valve casing having a port, a movable gate, a lip integral with the casing around the inner wall of the port and projecting toward the gate chamber, a removable seat constructed so that it may be slipped over said projection and fit around the same, said seat provided with a shoulder extending partly around its outer periphery, and means for holding said seat locked to said casing, comprising parts for engaging the said shoulder, the movement of one of said parts serving to unlock the seat and permit its removal.

## INCORPORATIONS

**Adjustable Steel Centering Company,** Wilmington, Del.; capital, \$50,000. Incorporators: F. R. Hansell, Philadelphia; George H. B. Martin and S. C. Seymour, Camden, N. J.

**George W. Cummings Testing Laboratories,** Boston, Mass.; laboratories; capital, \$50,000. President, George W. Cummings, Malden; Treasurer, Fred E. Crawford, Waverlytown; Clerk, George W. Cummings, Jr., Malden.

**Foster & Glidden Engineering Company,** Buffalo, N. Y.; general contractors; capital, \$50,000. Incorporators: Charles B. Foster, J. Percy Clifton, Vern H. Chapman, Buffalo.

**Illinois Heating, Light and Power Company,** Canton, Ill.; to operate light, heat and power plant; capital, \$25,000. Incorporators: James D. Robertson, Alexander Snedden, Niel Baxter, Sr.

**Montrose Flint Company,** Trenton, N. J.; to quarry stone, marble, flint, felspar, etc.; capital, \$200,000. Incorporators: G. M. Howell, Gottlieb Harman, William N. Cooper, Trenton, N. J.

**Pawtucket Granolithic Construction Company,** Boston, Mass.; cement; capital, \$50,000. President, Emma E. Mullen, Waltham; Treasurer, Francis A. Sylvester, Pawtucket, R. I.; Clerk, George M. Faulkner, Brookline.

**C. F. Pease Blue Print Machinery Supply Company,** 1415 Ashland Block, Chicago, Ill.; to manufacture blue printing supplies; capital, \$25,000. Incorporators: Charles F. Pease, Henry C. Gawler, William S. Cameron.

**Purification and Engineering Company,** New York, N. Y.; filtration appliances and machinery for purification of water and sewerage; capital, \$50,000. Incorporators: Edward C. Epple, 76 Himrod street, Brooklyn; Otto Budinger, 552 Lenox avenue, New York; L. M. Lawson, Jr., Stratford, Conn.

**Read-Coddington Engineering Company,** Niagara Falls, N. Y.; general contractors; capital, \$50,000. Incorporators: Willett W. Read, Rose R. Coddington, Arthur Schoellkopf, Paul A. Schoellkopf, Niagara Falls, N. Y.; George William Olmstead, Buffalo.

**Royal Contracting Company,** New York, N. Y.; general contractors; capital, \$30,000. Incorporators: Alice M. Allen and Charles F. Allen, 571 West 139th street, New York; Rufus L. Savage, West Brighton, N. Y.

**Seaboard Clay Manufacturing Company,** Jersey City, N. J.; building materials, clay, tile, stone, brick, etc.; capital, \$2,000,000. Incorporators: Carlyle Garrison, Henry A. Oetjen, Clarence S. Blake, as above.

**Susquehanna River Power Company,** Hartwick, Pa.; real estate, develop power, etc.; capital, \$200,000. Incorporators: Charles A. Greene, Jesse Myers, Thomas Achenbach, 25 Broad street, New York.

**Taylorville Railway, Light, Heat and Power Company,** Taylorville, Ill.; to operate electric light, power and street railway plant; capital, \$5,000. Incorporators: J. A. Adams, Alice M. Moore, I. J. Perkins.

**Union Traction Company,** Clarksville, Tex.; to build an electric railway from Texarkana via Sherman and Fort Worth to Mineral Wells. Incorporators: C. P. Moore, President, and others.



## THE WEEK'S CONTRACT NEWS

Relating to Municipal and Public Work—Street Improvements—Paving, Road Making, Cleaning and Sprinkling—Sewerage, Water Supply and Public Lighting—Fire Equipment and Supplies—Buildings, Bridges and Street Railways—Sanitation, Garbage and Waste Disposal—Police, Parks and Miscellaneous—Proposals and Awards

To be of value this matter must be printed in the number immediately following its receipt, which makes it impossible for us to verify it all. Our sources of information are believed to be reliable, but we can not guarantee the correctness of all items. Parties in charge of proposed work are requested to send us information concerning it as early as possible; also corrections of any errors discovered.

### BIDS ASKED FOR

STATE	CITY	RECEIVED UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
<b>Street Improvements</b>				
New York	Brooklyn	March 11, 11 A.M.	Furn. 500 net tons refined asphalt; rail fences on streets.	Bird S. Coler, Boro President.
New Jersey	Paterson	March 11, 2 P.M.	Macadamizing Midvale road, Boardville to W. Milford twp.	Winfield S. Cox, Bd. Freeholders.
New Jersey	Farmingdale	March 11	Bldg. stone road, 1,400 ft. long; also 3 miles gravel road.	Geo. W. Patterson, Jr., Clk. Bd. Freeholders.
New York	Buffalo	March 11	Paving 2 sts., repairing 2; macadamizing one street.	F. G. Ward, Com. Pub. Wks.
Iowa	Des Moines	March 11	Constructing brick and cement walks during 1908.	W. W. Wise, Bd. Pub. Works.
Louisiana	Port Hudson	March 12, 10 A.M.	Repairing roadway, bridge and culvert to Nat'l Cemetery.	Capt. Arthur Cranston, U. S. A., N Orleans.
Mississippi	Vicksburg	March 12, 10 A.M.	Repairing roadway leading to Nat'l Cemetery.	Capt. Arthur Cranston, U. S. A., New Orleans, La.
Missouri	Kansas City	March 12, 11 A.M.	Three contracts, grading, macadamizing, etc.	Lt. John B. Barnes, Q. M., U. S. A.
New York	Fort Ontario	March 12	Bldg. 720 sq. yds. macadam road and brick gutters.	
Michigan	Saginaw	March 12, 4:30 P.M.	Paving portions 21 sts., 115,000 sq. yds., inc. curb, grading, drainage, with asphalt, brick, wood block, etc., all on concrete or macadam.	Dan'l F. LaBar, Pres. Bd. Pub. Wks.
Ohio	Cincinnati	March 13, noon	Improving Edmundson road from Edwards to Duck Creek road.	Fred. Dreihls, Clk. Co. Com'rs.
Maryland	Baltimore	March 14, 11 A.M.	Macadam, grade, curb, gutter, Whiteford St.	Com'rs for Opening Sts.
Iowa	Des Moines	March 14, 11 A.M.	Paving 2,420 sq. yds. brick on concrete, W. 19th Street.	W. W. Wise, Chm. Bd. Pub. Wks.
Wisconsin	Watertown	March 14, 2 P.M.	Improving portions Main, Church and N. Church Sts.	E. B. Parsons, City Engineer.
Wisconsin	Sheboygan	March 14, 4 P.M.	Macadam, 8,500 sq. yds.; curb, 3,353 ft., etc., Niagara Ave.	John Kummer, Chm. Bd. Pub. Wks.
Indiana	Indianapolis	March 14	Grading and paving walks Broadway, Norwood and 12 other streets.	Blaine H. Miller, City Eng'r.
North Carolina	Wilson	March 15	Laying 90,000 sq. ft., granolithic sidewalks.	R. J. Grantham, City Engineer.
Pennsylvania	Scranton	March 16, 10:30 A.M.	Bitulithic paving, 14,000 sq. yds., 2 sts.; also sheet asphalt, 1 st., on concrete curb, grading, etc.	Chas. R. Acker, Dir. Pub. Wks.
Iowa	Des Moines	March 16, A. M.	Improving Prospect Blvd., inc. 2,600 ft. curb and gutter.	W. W. Wise, Bd. Pub. Serv.
Colorado	La Junta	March 16, noon	Ballasting portion of road between Swint and Otero.	T. W. Jaycox, State Eng'r, Denver.
Ohio	Zanesville	March 16, noon	Pave and curb Putnam Ave.; brick or asphalt Brtn. Blvd.	J. T. Hahn, Sec'y Bd. Pub. Ser.
West Virginia	Huntington	March 16, noon	Vit. brick paving, 84,000 sq. yds.; curb, 36,000 lin. ft., etc.	John Coon, Chm. St. Com. Council.
Wisconsin	Neenah	March 16, 1:30 P.M.	Constructing 9,000 yds. brick paving, Wisconsin Ave.	H. L. Sweet, City Engineer.
Connecticut	New Haven	March 16, 2 P.M.	Furn. Belgian block, bluestone curb, etc.	C. W. Kelly, City Engineer.
Indiana	Elkhart	March 16, 2 P.M.	Brick paving, 20,463 sq. yds. S. Main St.; \$40,898.	A. M. Smith, City Engineer.
British Columbia	Victoria	March 16, 4 P.M.	Furn. C. I. pipe, 33,000 ft. 12-in.; 18,000 ft. 8-in.; 36,500 ft. 6-in.; 25,000 ft. 4-in.; del. by Sept. 1.	Purchasing Agent.
Michigan	Menominee	March 16, 5 P.M.	Brick paving, Ludington Ave.; macadam 2 streets.	Albert Hass, City Engineer.
Illinois	Cairo	March 16	Paving, sewer and filling Sycamore St.	W. B. Thistlewood, City Eng'r.
Mississippi	Grenada	March 16	Furn. and laying 25,000 to 100,000 sq. ft. grano. walks.	Committee on Streets.
New Jersey	Asbury Park	March 16	Constructing 25,000 sq. yds. of pavement.	W. C. Burroughs, City Clerk.
Dist. of Col'bia	Washington	March 16	Grading at Arlington Nat'l Cemetery, Virginia.	M. Gray Zalinski, Q. M., U. S. A.
Iowa	Clinton	March 16	Brick paving on concrete, 2,550 sq. yds.; 1,150 ft. curb and gutter.	W. E. Hayes, City Clerk.
West Virginia	Huntington	March 16	Brick paving, 84,000 sq. yds.; curb, 36,000 lin. ft. curb, grading, etc.	A. B. Mawpin, City Engineer.
South Carolina	Laurens	March 16	Brick paving, 9,671 sq. yds.; cement walks, 2,991 sq. yds., etc.	W. H. Gikerson, City Clerk.
Missouri	St. Louis	March 17, noon	Improving sundry streets, etc.; estimate, \$378,000.	A. J. O'Reilly, Pres. Bd. Pub. Imp.
New Jersey	Toms River	March 17, noon	Bldg. 24,633 ft. gravel road in Dover and Buck townships.	Wm. Segoin, Pt. Pleasant, Eng'r.
Indiana	Gary	March 17, 2 P.M.	Macadamizing several streets.	C. O. Holmes, Clk. Town Trustees.
Wisconsin	Racine	March 17	Brick paving, 5,400 sq. yds.; concrete gutter, etc., 2,218 ft.	P. H. Connolly, Bd. Pub. Works.
New York	Brooklyn	March 18, 11 A.M.	Furn. 810 cu. yds. broken trap rock, 270 cu. yds. screenings; laying cement sidewalks, etc.	Bird S. Coler, Boro President.
Pennsylvania	North Warren	March 18, noon	Paving and curb, driveway to State Hospital for Insane.	S. W. Waters, Sec'y Bd. Trustees.
Kentucky	Louisville	March 18	Grade, curb, pave 15 sidewalks, 3,000 sq. yds.; \$5,000.	J. P. Claybrook, Ch. Eng'r D. P. W.
Indiana	Winchester	March 18	Improving various streets.	R. H. Crandal, City Engineer.
North Carolina	Newbern	March 19	Constructing about 20 miles of concrete sidewalks.	F. T. Patterson, City Clerk.
North Carolina	Newbern	March 19	Constructing granite curb for 15 miles of sidewalks.	F. T. Patterson, City Clerk.
Ohio	Cincinnati	March 20, noon	Furnishing municipal asphalt repair plant.	John J. Wenner, Clk. Bd. Pub. Ser.
Ohio	Cincinnati	March 20, noon	Repairing number of pike roads in County.	Fred Dreihls, Clk. Co. Com'rs.
Indiana	Terre Haute	March 21, 11 A.M.	Grading and graveling road No. 12, Vigo Co.	Nathan G. Wallace, Co. Auditor.
Nevada	Reno	March 23, 4 P.M.	Grading and macadamizing Dist. No. 1.	H. E. Christie, City Clerk.
Kentucky	Ashland	March 23	Brick or bitulithic, 12,500 sq. yds.; vit. brick, 17,100 sq. yds.; conc. curb and gutter, 19,000 lin. ft.	Jos. W. Bosley, City Engineer.
New Jersey	Somerville	March 24, 11 A.M.	Grading and macadamizing 3 roads, 7.50 miles long.	Bd. Chosen Freeholders.
Texas	Palestine	March 25, 4 P.M.	Constructing 25,000 sq. yds. street paving.	S. P. Allen, City Engineer.
Pennsylvania	Harrisburg	March 25	Constructing 3 State roads, 18,043 ft.	Jos. W. Hunter, St. H'way Com'r.
Pennsylvania	Harrisburg	March 26	Constructing 3 State roads: total, 29,918 ft.	Jos. W. Hunter, St. H'way Com'r.
Indiana	Valparaiso	March 27, 8 P.M.	Constructing 36,619 sq. yds. brick, 11,211 with sand, and 25,328 with asphalt filler; all on macadam; cement curb.	G. F. Stinchfield, City Engineer.
Pennsylvania	Harrisburg	March 27	Constructing 4 State roads, 34,655 ft.	Jos. W. Hunter, St. H'way Com'r.
Alabama	Fort Morgan	March 30, 1:30 P.M.	Constructing vit. brick roads at post.	Capt. L. F. Garrard, O. M. U. S. A.
New York	Fort Wood	April 1, 11:30 A.M.	Constructing roads and walks at post.	C. C. Burnell, Q. M., U. S. A.
Indiana	Rushville	April 2	Improving highway, line between 3 counties.	A. L. Wynship, Rush Co., Aud.
Indiana	Madison	April 7, 10 A.M.	Bldg. macadam road 8,476 ft. long, 12 ft. wide, 12 ins. deep, \$3,680.	G. F. Crozier, County Auditor.
Minnesota	Fork	May 1	Constructing five miles of roads.	J. P. Lein, Township Clerk.
Illinois	Anna	May 1	Constructing 24,758 sq. yds. brick pavement.	C. W. Brown, Jacksonville, C. E.
<b>Water Supply</b>				
Pennsylvania	Pittsburg	March 12, 10 A.M.	Furn. pipe, castings, valves, hydrants, etc.	Alex. B. Shepherd, Dir. Pub. Works.
Virginia	Petersburg	March 12, noon	Bldg. 60,000-gal. steel water tower; plans by March 8.	R. D. Budd, City Engineer.
Kansas	Kansas City	March 12	Erecting 27,000 gal. steel tank and tower, Sch. for Blind.	F. W. Knapp, Sec'y Bd. Control, Topeka.
Michigan	Grand Rapids	March 12	Furn. 800 tons c. i. water pipe, specials, valves, etc.	L. W. Anderson, City Engineer.
Ohio	Cleveland	March 13, noon	Furnishing all brass corporation cocks, stop and waste cocks, required during 1908.	A. R. Callow, Sec'y Bd. Pub. Serv.
Missouri	Jefferson Bar'ks	March 14, 11 A.M.	Constructing water and sewer systems.	O. W. Bell, Q. M. U. S. A.
British Col'bia	Vancouver	March 16, 4 P.M.	Furn. pipe: 33,000 ft. 12-in.; 18,000 ft. 8-in.; 36,500 ft. 6 in.; 25,000 ft. 4-in.	N. A. Clement, City Engineer
New Jersey	Mendham	March 16, 8 P.M.	Constructing water works system; also for furn. 510 tons c. i. pipe, 8 tons specials, 38 double-nozzle fire hydrants, 44 valves, 30 automatic air valves, 37 valve boxes.	E. W. Ellicott, Mayor.
Pennsylvania	Philadelphia	March 17, noon	Auxiliary pump for filter plant; pump ends, pipe connections, and track scales; contracts, 139, 140, 141, 142.	Wm. R. Knight, Jr., Act. Dr. D. P. W.
New Jersey	Irvington	March 17, 8 P.M.	Grading East Spee-way Avenue.	M. Stockman, Town Clerk.
Kansas	Frankfort	March 17	Furn. material and bldg. \$25,000 water works plant.	Burns & McDonnell, K. C., Mo., C. E.
California	Oakland	March 18, 11 A.M.	Labor and material for constructing salt water pumping plant; specifications, etc., at MUN. JOUR.	Walter B. Fawcett, Sec'y Bd. Pub. W.
Illinois	Wilmette	March 18, noon	Furn. & laying 1,925 ft. 6-in., 500 ft. 8-in. mains, etc.	I. J. Bryan, Clk., San Dist., Chicago

## Water Supply—Continued.

Dist. of Col'bia.	Washington.	March 23, 10:30 A.M.	Furn. wrought iron and steel pipe, fittings, valves, etc.	H. F. Hodges, Ist. Canal Com'n.
Oklahoma.	Norman.	March 23, 8 P.M.	Furn. and laying several miles c. i. water mains.	M. A. Earl & Co., Muskogee, C. E.
Quebec.	Montreal.	March 24, noon.	Furn. and erect. 12,000,000 imp. gal. steam pump.	George Janin, Supt. W. W.
Manitoba.	Winnipeg.	March 24.	Furn. turbine pump, 2,500,000 imp. gals. electric motor.	H. Peterson, Sec'y Bd. Control.
Massachusetts.	Springfield.	March 25, 2 P.M.	Bldg. sed. basin, 6 covered masonry filters, bldgs., etc.	E. E. Lochridge, Ch. Engr. W. Bd.
South Dakota.	Pine Ridge Ag'cy	March 25, 2 P.M.	Furn. and erect. 25,000-gal. steel water tank and tower.	Com'r Ind. Aff's, Wash., D. C.
New York.	McJraw.	March 30.	Constructing water works for village of McGranville.	W. G. Stone, Mann Bldg., Utica, C. E.
Kentucky.	Versailles.	April 1.	Constructing \$60,000 water works and sewer system.	The Holmboe Co., Louisville, Engrs.
Georgia.	Montezuma.	April 1.	Bldg. canal power system and pumping station.	Dr. C. H. Richardson, Mayor.
Ohio.	Hudson.	April 1.	Constructing water works and other improvements.	D. M. Hosford, Cleveland, C. E.
Georgia.	Atlanta.	April 1.	Bldg. 350,000,000-gal. reservoir, with 250,000,000 gals. available, inc. 125,000 cu. yds. exc.; cost, \$30,000.	Park Woodward, Gen. Mgr. Nat. Com.
Minnesota.	Rushford.	April 8, 8 P.M.	Extending water system.	C. O. Alm, City Clerk.
North Carolina.	Maxton.	April 14, 7:30 P.M.	Installing water works system; also material.	R. M. Williams, Mayor.

## Sewerage

Ohio.	Cleveland.	March 12, noon.	Constructing sewers in various streets.	W. J. Springborn, Pres. B. P. S.
Ohio.	Newark.	March 12, noon.	Constructing tile sewer in North Ave.	Albert C. Gundlach, Clk. B. P. S.
Kentucky.	Louisville.	March 12, noon.	Bldg. Sec. A, Beargrass interceptor, mainly 2,109 ft., 5' 8" x 5' 4 1/2", 2,447 ft., 6' 1 1/2" x 6' 6"; exc., 2,510 lin. ft., open cut; 2,120 ft. in tunnel; concrete, 3 classes, 3,500 cu. yds.; piles, 24,000 lin. ft.; rein. steel bars, 126,000 lbs.	J. B. F. Breed, City Engineer.
Missouri.	Jefferson Bar'cks.	March 14.	Constructing water and sewerage systems at barracks.	O. W. Bell, Q. M., U. S. A.
Connecticut.	New Haven.	March 16, 2 P.M.	Furn. vit. sewer pipe, castings, cement, etc.	C. W. Kelly, City Engineer.
Illinois.	Monticello.	March 16, 2 P.M.	Bldg. 1,137 ft. 8-in., 650 ft. 10-in. sewer, etc.; cost, \$2,500.	J. C. Tippet, Pres. Bd. Local Imp.
Michigan.	Menominee.	March 16, 5 P.M.	Constructing sewers in sundry streets.	F. S. Norcross, City Clerk.
California.	Patton.	March 16, 8 P.M.	Improving, etc., storm water channels, St. Hosp. grounds.	Dr. A. P. Williamson, State Hospital.
Tennessee.	Chattanooga.	March 17, 2:30 P.M.	Bldg. sewer, Chestnut St., inc. 3,900 ft. egg-shaped sewer, 44 x 66-in. to 63 x 94 1/2-in. and 175 ft. 72-in. circ. sewer.	H. F. Van Dusen, Chm. Bd. Pub. W's.
New York.	Auburn.	March 17, 8 P.M.	Bldg. sewers and disposal plant; 4 wards, \$100,000, inc. 14,700 ft. 8 in., 11,300 ft. 10 in.; 6,000 ft. 20 in.; 3,600 ft. 15 in.; 300 ft. 18 in.; 1,250 ft. 20 in.; 16,000 cu. yds. exc., 5 to 18 ft. deep; 17,000 ft. 5-in. vit. tile; also 20,000 ft. 4 in.; 6,000 ft. 6 in.; 7,000 ft. 8 in.; 2,000 ft. 10 in.; 200 ft. 12 in., of seconds; 84 manholes, 9 ft. deep; 12 flush tanks; 12 lamp holes; also reinforced concrete septic tanks and contact beds and auto. closing appliances.	W. Thomas Wooley, City Engineer
California.	Oakland.	March 18, 11 A.M.	Bldg. inter. sewer, 3d St., bet. Myrtle & Union Sts.; outlet Linden Street.	W. B. Fawcett, Sec'y Bd. Pb. Wks.
Oklahoma.	Norman.	March 23, 8 P.M.	Constructing complete sanitary sewer system, \$35,000.	John E. Millar, Mayor.
Kansas.	Wellington.	March 23.	Furn. mat. & bldg. 3 1/2 miles 6, 8, 10, 12-in. pipe.	H. A. Rowland, McPherson, C. E.
Ohio.	Jackson.	March 25.	Bldg. 1 1/2 miles sanitary sewers; estimated cost, \$15,000.	J. W. Turner, Village Engineer.
Pennsylvania.	St. Marys.	March 30, 8 P.M.	Bldg. system double-strength vit. pipe, sanitary sewers: 3,531 ft., 15-in.; 5,605 ft., 12-in.; 6,189 ft., 10-in.; 40,852 ft., 8-in.; 184 manholes, 38 flush tanks; cont. let for furn. material.	L. C. Hanhauser Boro Secretary.
Ohio.	Lancaster.	April 1.	Constructing sewers, portion Dist. No. 3.	Geo. H. Brown, Chm. B. P. S.
Ohio.	Put-in-Bay.	April 2.	Constructing sewers in Dist. No. 2.	Chas. E. DeWitt, Port Clinton, C. E.
Nebraska.	Holdeige.	April 3.	Furn. mat. & bldg. complete sanitary sewer system.	M. A. Earl & Co., Muskogee, Okla., Engineers.
North Carolina.	Maxton.	April 4, 7:30 P.M.	Bldg. Sewer System; also furnishing material on both.	R. M. Williams, Mayor.
Illinois.	Anna.	May 1.	Constructing sanitary sewers, to cost \$20,000.	J. L. Hammond, City Clerk.

## Public Buildings

Wisconsin.	La Crosse.	March 12, 10 A.M.	Erecting normal school building.	J. A. Peacock, Pres. Reg. Norm. Sch. Madison.
Wisconsin.	Milwaukee.	March 12, 10 A.M.	Erecting normal school building.	Van Ryn & De Gelleke, Archts.
Indiana.	Indianapolis.	March 12, 1 P.M.	Constructing school, Sugar Grove Ave. and 21st St.	John E. Cleland, Bus. Dir. Sch. Comr.
New York.	Rochester.	March 12, 3 P.M.	Constructing, complete, except elevator, exten. to Federal Bldg.	James Knox Taylor, Wash., D. C.
Minnesota.	Pipestone.	March 12.	Erecting hospital building at Indian School.	W. S. Campbell, Supt. Ind. School.
Pennsylvania.	Inliana.	March 12.	Erecting \$75,000 school; C. C. & A. L. Thayer, New Castle, Arch.	E. M. Lockhard, Pres. School Bd.
Wisconsin.	Milwaukee.	March 13.	Erecting engine-house in Twentieth Ward.	Peter J. Koehler, Comptroller.
Dist. of Col'bia.	Washington.	March 14, noon.	Constructing a 16-room school building.	Jay J. Morrow, Eng'r Commission.
Massachusetts.	Springfield.	March 14, noon.	Bldg. Kensington Ave. school; also heating, etc.; cost, \$90,000.	B. Hammett Seabury, Architect.
Nebraska.	Hastings.	March 14.	Erecting \$17,000 Carnegie Library and Science Bldg.	Oswald Oliver, Chm. Bldg. Com.
Indiana.	Anderson.	March 14.	Erecting \$125,000 high school, R. P. Daggett & Co., Architects.	J. D. Pearcey, Supt. School Bd.
Iowa.	Des Moines.	March 14.	Erecting new City Hall, to cost about \$250,000.	Proudfoot & Bird, Crocker Bldg. Architects.
Idaho.	Buhl.	March 14.	Bldg. 8-room school; also heating and plumbing; Dist. No. 12.	H. S. Hobson, Chm. School Bd.
California.	Hollister.	March 14.	Co. high school; plans by W. H. Weeks, Watsonville.	J. H. Garner, Co. Superintendent.
Wisconsin.	Green Bay.	March 16, 10 A.M.	Erecting Co. jail, sheriff's residence and power house.	Foeller & Schober, Paul Foxblk., Architects.
Wisconsin.	Madison.	March 16, 10 A.M.	Entire construction, Woman's Bldg., Univ. of Wisconsin.	M. E. McCaffrey, Act. Sec'y Univ. of Wisconsin.
Nebraska.	Superior.	March 16, 10 A.M.	Erecting \$45,000 high school; John Latenser, Omaha, Arch.	M. L. Pierce, Sec'y School Board.
Virginia.	Fort Monroe.	March 16, noon.	Bldg. ordinance store house; rebldg. 3 double brick bldgs., etc.	Capt. Ernest R. Tilton, Q. M., U. S. A.
Pennsylvania.	Philadelphia.	March 16, noon.	Bldg. 3 or 4-story House of Detention, brick and stone.	Philip H. Johnson, Land Title Bldg.
Arizona.	Florence.	March 16, noon.	Bldg. \$120,000 prison; 600 ft. square enclosure, stone, brick or reinforced concrete, 16 ft. high; bldgs. 46 x 186 ft.	Jas. F. Riggs, Sec'y Terry Bd. Cont'l.
Wisconsin.	Rhinelander.	March 16, 2 P.M.	Plans, 2-story and basement, brick or stone, \$10,000 Co. Court House.	Arthur Taylor, Chm. Bldg. Com.
Florida.	Pensacola.	March 16, 3 P.M.	Bldg. quarters and hospital bldgs. Santa Rosa Quar. Station.	James Knox Taylor, Wash., D. C.
North Carolina.	Greensboro.	March 16.	Erecting brick Science bldg. for St. Normal & Indus. College.	J. L. Forest, Pres. Bd. Trustees.
Ohio.	Delaware.	March 17, noon.	Bldg. brick hospital for Girls' Industrial Home Trustees.	Marriott & Allen, Archts., Columbus.
North Dakota.	Rolette.	March 17, 7 P.M.	Bldg. brick school for Leonard School, Dist. No. 9.	J. A. Shannon, Archt., Devils Lake.
Texas.	Beaumont.	March 17.	Plans, etc., for \$20,000 market house; also 3 fire houses; total, \$20,000.	J. G. Sutton, City Secretary.
Virginia.	Petersburg.	March 17.	Bldg. brick and concrete school, 12 rooms and auditorium.	Chas. M. Robinson, Richmond, Arch.
Rhode Island.	Providence.	March 18, noon.	Erecting several bldgs. for City Hospital, etc.	French & Hubbard, Boston, Mass., Engineers.
New York.	Ravenna.	March 18, noon.	Furnishing material and building school.	Fuller & Pitcher, Albany, Archts.
North Dakota.	La Moure.	March 18, 2 P.M.	Erecting Co. jail; also basement for new Court House.	E. W. Field, County Auditor.
California.	Los Angeles.	March 18, 3 P.M.	Hot-water heat, ventilating apparatus, etc., Federal Building.	James Knox Taylor, Wash., D. C.
Minnesota.	Iowa.	March 18, 8 P.M.	Erecting combined lock-up and fire hall.	Wells E. Bennett, La Crosse, Wis., Architects.
New Jersey.	San ly Hook.	March 19, 2 P.M.	Constructing barracks at Fort Hancock.	Quartermaster U. S. A.
Ohio.	Youngstown.	March 20, noon.	Labor and material for bldg. buggy and wagon shed.	W. H. McMillin, Clk. Bd. Pub. Serv.
North Dakota.	Knox.	March 20, 4 P.M.	Bldg. 4-room brick school; also steam-heat plant.	Haxby & Gillespie, Archt., Fargo.
Ohio.	Columbus.	March 20.	Installing new system water closets, etc., in Court House.	F. M. Sayre, County Auditor.
Washington.	Puget Sound.	March 21, 11 A.M.	Erecting 3 bldgs. for Naval Hospital at navy yard.	Commandant, Navy Yard.
Pennsylvania.	Mt. Pleasant.	March 22.	Bldg. 2-story high school, 85 x 100 ft.; cost, \$35,000.	W. G. Sloan, Greensburg, Arch.
Ohio.	Toledo.	March 23, noon.	Bldg. 4-room addition to South St. School, etc.	Geo. L. Mekesson, Dir. of Schools.
Wisconsin.	Rhinelander.	March 23, 2 P.M.	Bldg. fireproof Co. Court House; cost, \$100,000.	Arthur Taylor, Chm. Bldg. Com.
Virginia.	Richmond.	March 23.	Erecting combined market and armory building; cost, \$100,000; also designs, drawings, etc.	C. E. Bolling, City Engineer.
North Dakota.	Devils Lake.	March 24, 3 P.M.	Constructing, completely, Federal Building.	James Knox Taylor, Wash., D. C.
Michigan.	Gand Rapids.	March 24, 3 P.M.	Constructing, except elevators, Federal Building.	James Knox Taylor, Wash., D. C.
Missouri.	Columbia.	March 25.	Erecting \$100,000 Agr. Bldg.; electric and gas light, heat, etc.	J. G. Babb, Sec'y Univ. Mo.
Michigan.	Mt. Pleasant.	March 26, noon.	Erecting Physical Training Bldg. for Cen. Mich. Normal School.	E. W. Arnold, Battle Creek, Arch.
Ohio.	Columbus.	March 30.	Erecting Indianola School; cost, \$65,000.	David Riebel, Architect.
Ohio.	Ironton.	April 1, 10 A.M.	Furniture and fixtures for new Co. Court House.	A. C. Robinson, County Auditor.
North Dakota.	Ft. Lincoln.	April 1, 1:30 P.M.	Erecting, etc., brick addition to post hospital.	Lt. Bowers Davis, Q. M., U. S. A.
Pennsylvania.	Erie.	April 1, 3 P.M.	Heating and vent. system, Erie high school; cost, \$30,000.	W. J. Flynn, Sec'y Bd. Education.
Nebraska.	Schuyler.	April 1.	Erecting \$11,000 City Hall; J. P. Guth, Paxton Bldg., Omaha.	The Mayor
New Jersey.	Weehawken.	April 1.	Competitive plans for \$50,000 fire-proof hospital.	J. M. Rector, M. D., Union.
New York.	Whitesboro.	April 2, 7:30 P.M.	Labor and material for Fire Dept. bldg.; separate bids.	W. G. Frank, Utica, Architect.



## Public Buildings—Continued.

New York	Corning	April 4, 3 P.M.	Constructing U. S. Post Office.	James Knox Taylor, Wash., D. C.
Pennsylvania	Hazleton	April 6, 3 P.M.	Constructing, complete, U. S. Post Office.	James Knox Taylor, Wash., D. C.
Georgia	Irwinville	April 6	Erecting jail for Irwin County; cert. check, \$1,000.	T. Firth Lockwood, Arch. Columbus.
Georgia	Oella	April 6	Erecting Co. jail; T. F. Lockwood, Columbus, Arch.	H. T. Fletcher, Chm. Co. Com'rs.
Missouri	Nevada	April 7, 3 P.M.	Constructing, complete, U. S. Post Office.	James Knox Taylor, Wash., D. C.
Virginia	Portsmouth	April 8, 3 P.M.	Constructing, complete, Federal Building.	James Knox Taylor, Wash., D. C.
Georgia	Cairo	April 8	Bldg. \$40,000 Co. Court House and \$13,000 jail.	Alex Blair, Macon, Architect.
Illinois	Dixon	April 9, 3 P.M.	Constructing U. S. Post Office.	James Knox Taylor, Wash., D. C.
Mississippi	Jackson	April 10, 3 P.M.	Constructing extension to Post Office.	James Knox Taylor, Wash., D. C.
Alabama	Bessemer	April 11, 3 P.M.	Constructing, complete, U. S. Post Office.	James Knox Taylor, Wash., D. C.
Washington	Tacoma	April 14, 3 P.M.	Constructing, except elevators, Federal Building.	James Knox Taylor, Wash., D. C.
Ohio	Mercer	April 14	Erecting \$7,000 school bldg; Howard, Inscho & Merriam, Arch.	W. H. Meuing, Clk. School Board
New York	Albany	April 15, 5 P.M.	Competitive plans for new Prison at Sing Sing; 30 fire-proof bldgs. in groups; 1,400 cells; cost \$2,000,000.	Chas. F. Howard, Pres. Com'n! New Prisons.
Pennsylvania	New Castle	May 1	Erecting 3-story brick and stone high school, 200 x 190 feet., estimated cost, \$250,000.	W. G. Echles, Lawrence, Tr. Bldg., Architect.

## Bridges

Louisiana	Port Hudson	March 12, 10 A.M.	Repairing bridge and culvert leading to Nat'l Cemetery	Capt. Arthur Cranston, U. S. A., New Orleans.
Colorado	Cortez	March 13, noon	Bldg. timber bridge, two 55-ft. spans, Dolores River	T. W. Jaycox, State Eng'r, Denver.
Ohio	Cleveland	March 14, 11 A.M.	Constructing steel-concrete bridge in Euclid township.	A. B. Lea, County Surveyor.
Indiana	Brookville	March 14, 1 P.M.	Constructing various arches and bridges in Franklin County.	Charles A. Miller, Co. Auditor.
Indiana	Salem	March 14, 1:30 P.M.	Bldg. 2 bridges, 80 x 18 ft., over Brock Creek.	Sam. G. Ellis, County Auditor.
Washington	Mt. Vernon	March 14	Bldg. 264-ft. span steel bridge; cost, \$15,000 to \$20,000.	Waddill & Harrington, K. C., Mo., C. E.
Manitoba	Brandon	March 14	Bldg. rein. concrete and steel bridge with approaches.	Harry Brown, City Clerk.
Ohio	Nottingham	March 14	Bldg. superstructure, rein. concrete bridge; cost, \$12,768.	A. M. Felgate, Cleveland, Des. Eng'r.
Oregon	Grants Pass	March 16, 10 A.M.	Bldg. steel bridge over Rogue river; new plans wanted.	S. F. Cheshire, County Clerk.
Minnesota	Minneapolis	March 16, 11 A.M.	Bldg. bridges Nos. 122 and 329; also painting various bridges.	Hugh R. Scott, Co. Auditor.
Indiana	Mt. Vernon	March 16, 2 P.M.	Constructing Ziegler bridge in Black township.	Paul Maier, County Auditor.
Wisconsin	Milwaukee	March 17, 10:30 A.M.	Bldg. bascule bridge over Kinnickinnic River; \$40,000 bond.	C. J. Poetsch, City Engineer.
Colorado	Empire	March 18, noon	Bldg. rein. concrete bridge with 30-ft. span	T. W. Jaycox, State dEng'r, Denve
Michigan	Benton Harbor	March 19, 2 P.M.	Bldg. steel bridge over St. Joseph river, inc. swing or bascule channel and 2 approach spans and concrete substructure; 312 ft. long, 32 ft. roadway, wood block paving, two 7-ft. walks.	J. W. Pearl, Eng'r Jt. Br. Com.
Ohio	Columbus	March 20, noon	Reflooring Russell bridge over Alum Creek, Mifflin twp.	F. M. Sayre, Co. Auditor.
New Brunswick	Coverdale	March 23	Bldg. Mill Creek Mouth bridge in Albert Co.	C. H. La Billois, Pub. Works Dep't.
Pennsylvania	Washington	March 24, noon	Bldg. two 50-ft. and one 50-ft. spans, steel plate girder bridges, concrete brick covered floors; 20-ft. diam. concrete arch; 16-ft. steel rein. concrete span, etc.	Wm. Wylie, County Engineer.
Minnesota	Redwood Falls	March 25	Constructing 220-ft. bridge over Minnesota River.	L. P. Larson, County Auditor.
Wisconsin	Milwaukee	March 27, 10:30 A.M.	Bldg. Sec. 2 super. Wash. Ave. viaduct; check, \$30,000.	C. J. Poetsch, City Engineer.
Ohio	Cleveland	March 28	Bldg. culvert on Pitney road 1, E. Cleveland	A. B. Lea, County Surveyor.
Minnesota	Buffalo	March 31, 1:30 P.M.	Furn. material; also bldg. bridge over Croix River.	H. C. Brasie, County Auditor.
Minnesota	Watertown	March 31	Furn. 7,000 ft. white oak bridge plank, 3-in. thick, 16 ft.	J. F. Boylan, Village Recorder.
Alaska	Sitka	April 1, noon	Bldg. suspension bridge over Indian River, near Sitka.	Lt. Sam C. Orchard, U. S. A., Skag'y.
South Dakota	Brookings	April 8, 2 P.M.	Material and labor for building 28-ft. cement bridge.	P. J. Murphy, Co. Auditor.
South Dakota	Watertown	April 8, 2 P.M.	Bldg. 50-ft. steel span bridge, 7 ft. above water line, with 12-ft. wing and three 8-ft. wings, tubular piers, concrete-filled, with steel backing.	E. I. Lamby, County Auditor.

## Lighting and Electricity

Ohio	Columbus Bar'ks	March 14, 10 A.M.	Electric light fixtures, etc., 3 double sets quarters.	Capt. H. J. Hirsch, Q. M., U. S. A.
Wisconsin	Green Bay	March 16, 10 A.M.	Erecting and completing power house for Brown County.	Foeller & Schober, Architects.
Minnesota	Minneapolis	March 16, 11 A.M.	Furn. electric or acetylene light plant for Co. Farm.	Hugh R. Scott, Co. Auditor.
Wisconsin	Sheboygan Falls	March 16, 7:30 P.M.	For 25-yr. franchise for establishment, maintenance and operation of electric light plant and system.	Pres. and Trustees of Village.
California	Los Angeles	March 17, 3 P.M.	Installing conduit and electric wiring system, Federal Building.	James Knox Taylor, Wash., D. C.
Illinois	N. Chicago	March 18, noon	Power plant equipment, in power house, Naval Train Station.	Admiral J. E. Pillsbury, Wash., D. C.
Arkansas	Ft. L. H. Roots	March 18, 3 P.M.	Electric wiring, heating, etc., addition to hospital.	Constructing Quartermaster.
Delaware	Wilmington	March 31, 3 P.M.	Lighting streets by gas and electricity for 5 yrs. from Sept. 1, inc. electrical energy for 350 arc and 428 incan. lamps.	Howard B. Griffith, City Engineer.
Indiana	Mt. Vernon	April 1	Lighting streets for 10 yrs. from July 1, 1909 with electric lights, plant to consist of 85 2,000 c.p. enclosed arc lamps; 11 yr. franchise for commercial and residence lighting, 900 with contract.	Henry Kling, City Clerk.
Ohio	Hudson	April 1	Constructing electric light plant, water works, etc.	J. M. Ellsworth, Direc.
Dist. of Col'bia	Washington	April 6	Furn. electrical sup. to Bur. E. & Pr., 1 year from July 1.	Director Sullivan, B. E. & P.
Louisiana	Lecompte	April 7	Bldg. electric light plant, to cost \$10,000, steam operated.	W. H. Jones, City Clerk.
Texas	Fort Worth	April 7	1,280 c. p. 6.6 ampere a. c. arc lamps, complete, with inner and outer globes; lamps for street lighting, 250, 500 or 750 lamps.	J. J. Nunnally, City Auditor.
Texas	Fort Worth	April 7	Foundation, furnishing, erecting, etc., 650 kw., 3-phase, 60-cycle, 2,300-volt a.c. generator with exciter; 10 current transformers, cap. 100 6.6 ampere arc each; switchboard panels for 20 circuits of 50 arc each; exciter and generator panel; all wiring and pipe-fitting by city; also alternate bids.	J. J. Nunnally, City Architect.
Georgia	Lafayette	May 1	Constructing electric lighting plant.	J. A. Clements, City Recorder.

## Miscellaneous

Dist. of Col'bia	Washington	March 11, noon	Window frames and sashes for Senate Office Bldg.	Elliott Woods, Supt. Capitol.
Maryland	Baltimore	March 11	Constructing piers 4, 5 and 6; plans, etc., for \$15.	Harbor Board.
Dist. of Col'bia	Washington	March 12, 10:30 A.M.	Furn. Portland cement; 4,500,000 bbls. to be used.	Col. H. F. Hodges, Ist. Canal Com.
Florida	Key West	March 12, 11 A.M.	Furnishing 125 h.p. steam boiler, with accessories.	Capt. Conrad H. Lanza, Q. M. U. S. A.
New York	Brooklyn	March 12, 3 P.M.	Repairs and alterations and painting fences, parks and p'kways.	Dept. of Parks, New York City.
Ontario	Peterboro	March 12	Work on Sec. 3, Ontario-Rice Lake Div. Trent Canal.	L. W. Jones, Ottawa, Sec'y, D.R. & C.
Illinois	Chicago	March 12, 1 P.M.	Bldg., etc., gymnasium and field apparatus, etc., in parks.	Perkins & Hamilton, Arch.
Pennsylvania	Scranton	March 14, 10:30 A.M.	Removal, disposal of garbage, ashes, rubbish, 5 years.	F. L. Wormser, Dir. Pub. Safety.
Florida	Fort Taylor	March 14, 11 A.M.	Constructing a wharf.	Capt. C. H. Lanza, Key West, Q. M. U. S. A.
Dist. of Col'bia	Washington	March 14, noon	Furn., etc., direct radiators for hot water heating, Senate Office building.	Elliott Woods, Supt. Capitol.
Michigan	Coopersville	March 14, 7:30 P.M.	Heating, ventilating, plumbing, new school bldg.	James Price, Holland, Arch.
New York	Buffalo	March 14	Constructing concrete walls for ship lock.	H. M. Adams, Eng'r Corps U. S. A.
Michigan	Sault Ste. Marie	March 15	Widening Sault Ste. Marie canal.	U. S. Engineer, Detroit.
Dist. of Col'bia	Washington	March 16, 10:30 A.M.	Furn. pumps, tubular boilers, repair parts for steam shovels, etc.	H. F. Hodges, Ist. Canal Com'n.
California	Los Angeles	March 19, 3 P.M.	Installing vacuum cleaning system, Federal Building.	James Knox Taylor, Wash., D. C.
New Jersey	Camden	March 19, 8 P.M.	Furn. 2 piston steam fire engines, 2d and 3d sizes.	H. R. Read, Chm. Fire Com.
Dist. of Col'bia	Washington	March 23	Furn. iron and steel pipe, fittings, valves, fire brick, hose nozzles, dynamo and miscellaneous articles.	H. F. Hodges, Ist. Canal Com'n.
Michigan	Frankfort	March 25, 3 P.M.	Extension and repair of south pier.	Col. M. B. Adams, U. S. A., Grand Rapids.
Washington	Brewerton	March 28, 11 A.M.	Furn. 2 boilers, flue con. and steel stack, navy yard.	Commandant, Navy Yard.
California	Los Angeles	March 30, 3 P.M.	Elevator plant for Federal Building.	James Knox Taylor, Wash., D. C.
West Virginia	Wheeling	March 31, 11 A.M.	Furn. 6,500 bbls. Am. Port. cement, Dam 18, Ohio River.	F. C. Boggs, Capt. Eng'rs, U. S. A.
Iowa	Des Moines	March 31	Furn. fire hose for city during year.	Geo. F. Poorman, City Clerk.
Ohio	Hudson	April 1	Bldg. water works, light plant and other municipal imp'ts.	A. A. Augustus, Cleveland, Agt.
New York	Fort Wood	April 1, 2:45 P.M.	Constructing storage dock and timber wharf.	G. C. Burnell, Q. M., U. S. A.
South America	Buenos Ayres	May 1, 2 P.M.	Bldg. 2 underground electric railways, etc.	Argentine Legation, Wash., D. C.
Quebec	Quebec	May 1	Furnishing 30-ton capacity floating crane.	St. George Boswell, Ch. Eng'r Harbor Commissioners.
Ohio	Columbus	May 11, noon	Constructing garbage reduction works, cap. 100 tons per 24 hrs., on city land, inc. design, bldg., delivery, etc.	E. W. Hirsch, Sec'y Bd. Pub. Serv.

## STREET IMPROVEMENTS

**Decatur, Ala.**—The Board of County Commissioners has ordered an election, March 30, for voting on the question of bonds to the amount of \$260,000 for building pike roads. There is little doubt that the election will carry.

**Sacramento, Cal.**—An election will be held to decide the question of issuing \$75,000 street repair bonds and \$50,000 high school bonds.—Address City Comptroller.

**San Francisco, Cal.**—The Public Utilities Committee of the Board of Supervisors has approved the plan to extend Montgomery avenue to the water front, selecting Commercial street as the line of the proposed extensions. Marsden Manson, City Engineer, was instructed to prepare plans for widening Commercial street; estimate, \$2,000,000.

All bids for repaving Sutter street, between Grant and Van Ness avenues, were rejected on February 4 by the Board of Public Works.

**Bridgeport, Conn.**—For macadam road repairs \$42,000 is appropriated, and new macadam is allowed aside from a special appropriation of \$8,000 for the State road work on Fairfield avenue, west of the terminus of State street.

**Ft. Dade, Fla.**—Authority has been granted to the Depot Quartermaster for constructing a sidewalk.

**Dublin, Ga.**—The citizens have voted \$65,000 bonds for the extension of sewers, paving streets, etc.—Address City Clerk.

**Lucile, Ida.**—A wagon road ten miles in length will be constructed from Lucile to the Blue Jacket Mine.—Frank E. Johnesse, Manager, Blue Jacket Mine.

**Belleville, Ill.**—The city contemplates having four new streets paved with brick and curbing same, at an estimated cost of \$150,000.—Fred Deutchman, Jr., City Engineer.

**Chicago, Ill.**—The Board of Local Improvements has decided to improve certain streets during the coming summer, simultaneously with the reconstruction of the car tracks; total estimate of streets to be improved, eight miles.—Address Secretary of Board.

**Elgin, Ill.**—City Engineer Plumb has been directed to prepare plans for paving certain portions of North Liberty street with creosote-resinate blocks on a 6-inch concrete foundation; estimated cost of improvement, \$11,000.

**Freeport, Ill.**—The Board of Local Improvements has passed a resolution for grading, macadamizing and curbing with sandstone curbing sundry streets; estimated cost, \$26,380; also for grading, paving with brick and curbing with cement sundry streets; estimated cost \$6,100.—G. W. Graham, City Engineer.

**Gibson City, Ill.**—Plans have been made by C. F. Helman, C.E., Paxton, for brick paving for Gibson City; bids will probably be in about four weeks.—Wm. A. Davidson, City Clerk.

**Madison, Ill.**—Plans have been prepared and specifications written for brick paving of Madison avenue and Third street, 6-inch concrete foundation, cement filler; 27,712 square yards on Madison avenue; 7,500 square yards paving on Third street; manholes and catch basins.—F. E. Garesche, President, Village Board; Edmund Hall, Engineer, Priest Building, Granite City, Ill.

**Peru, Ill.**—City Engineer Porter has been directed to prepare estimates for paving Third street for a distance of a mile; the street will be paved with asphalt and curbed with cement curbing.

**Springfield, Ill.**—Ordinances have been passed providing for paving Cook street, from Eleventh street to East Grand avenue, 11,700 square yards, with brick on a 6-inch concrete foundation, with an asphalt fill, and 1,600 lineal feet sandstone curb. Estimated cost, \$26,155; also Capitol avenue, from Eleventh street to East Grand avenue, 12,000 square yards of brick pavement on a 6-inch concrete foundation, with an asphalt fill, and 6,450 lineal feet sandstone curb; estimated cost, \$26,656.

**Sycamore, Ill.**—Council is arranging to pave certain portions of California street.—Geo. A. James, Street Commissioner.

**Columbus, Ind.**—A petition has been filed for the construction of a gravel road from East Columbus to the Haw Creek bridge; a gravel road from Columbus west to the Two-mile House, and the improvement of Second street, which connects the two proposed roads. The Commissioners will ask for bids as soon as plans can be prepared.

**Gary, Ind.**—Council will petition the County Board to order an appropriation for the construction and maintenance of a road and bridge over the Little Calumet at Broadway.—Address Mayor Knott.

**Indianapolis, Ind.**—The Board of Public Works will soon ask for bids for a graded roadway in first alley north of Washington street; for brick roadway in Pine street from Washington street to Market street, and from Market to North Davidson streets; for a pipe sewer in first alley north of Twen-

ty-sixth street, and for opening alley west of Patterson street.

Preliminary plans for the construction of a boulevard on the north side of Fall Creek from Capitol avenue to Northwestern avenue are being prepared.—Blaine H. Miller, City Engineer.

**Lafayette, Ind.**—The Board of Public Works has ordered plans and specifications for the curbing, guttering and paving of Twenty-fourth street, from South to Ferry street.—John B. Truman, City Engineer.

**La Grange, Ind.**—Several streets are to be paved during the coming season.

**Martinsville, Ind.**—Council will soon ask for bids for the paving, grading and curbing of Mulberry and Jackson streets.

**Wabash, Ind.**—Council is planning to place a viaduct at Case street.—Address City Clerk.

**Elizabethtown, Ky.**—Council is preparing to improve several streets with asphalt paving.—Address City Clerk.

**Adams, Mass.**—The town will lay 1,000 to 1,500 yards of pavement on Park street; wood block is favored, but the material will be definitely decided on April 7.

**Elkton, Md.**—The Cecil County Board will issue \$60,000 in bonds for building public roads.—Address County Auditor.

**Hagerstown, Md.**—An ordinance has been passed for paving South Potomac street.

**Rockville, Md.**—The County Commissioners for Montgomery County have received a letter from the State Highway Commission approving the proposition for the construction of a Shoemaker pike from the corporation limits of the town of Kensington to Bradley lane, a distance of about three miles and a half, and stating that the plans for same will be prepared at once. The construction of this road will give a splendid thoroughfare from Kensington to Washington. A revised estimate places the cost of the proposed road at about \$24,000, of which amount the State will pay one-half, the Chevy Chase Land Company \$4,000, and the remaining \$8,000 will be paid by the county.

**Menominee, Mich.**—The Commissioners have voted to expend \$19,000 on the construction of new roads in the County.

**Braham, Minn.**—Bids will be received by the Village Council for corduroying.—P. J. Engberg, Village Recorder.

**Duluth, Minn.**—The Board of Public Works has under consideration constructing a boulevard on the lake shore; asphalt is to be used.

**Faribault, Minn.**—Council is preparing to pave certain streets.—Address City Clerk.

**Red Wing, Minn.**—The city contemplates brick paving on Broadway.—A. E. Rhame, City Engineer.

**Winona, Minn.**—Council is arranging to improve several streets by paving; the material to be used has not been selected.—Address City Clerk.

**Pasagoula, Miss.**—W. G. Kirkpatrick, C.E., Jackson, has been elected Engineer, to prepare plans, etc., for street improvements.

**Columbia, Mo.**—This city intends to build a number of brick-paved streets in the spring, also granitoid sidewalks; about 1.1-2 miles of streets and sidewalks are advertised at present; plans and specifications may be had from W. B. Cauthorn, City Engineer, Exchange National Bank Building, or J. N. Bicknell, City Clerk.

**Newark, N. J.**—Notices of intention to pave the following streets have passed the Board of Street and Water Commissioners: Boyd street, from West Kinney to Springfield avenue, with granite on concrete; Heller Parkway, from Summer avenue to Forrest Hill Parkway, with telford and brick gutters; Garden street, from New Jersey R. R. avenue to McWhorter street, with granite on concrete; South Fourteenth street, from Central avenue to Orange street, and North Fourteenth, from Central avenue to Orange street, with granite on concrete; Hermon street, from Chestnut to Thomas street, with bitulithic; Napoleon street, from Hamburg place to Elm road, with bitulithic; Hudson street, from Wallace place to Sussex avenue, with brick; Essex street, from Orange street to Jane street, with brick; Winans avenue, from Bergen street to Eighteenth avenue, with brick; Elizabeth avenue, from Peddie street to Hawthorne avenue, with telford and brick gutters; Lockwood street, from Ferry street to Lister avenue, with granite on concrete; Seymour avenue, from Clinton to Avon avenue, with telford and brick gutters; Komorn street, from Hamburg place to St. Charles street, with bitulithic; Shanley avenue, from Clinton avenue to Avon avenue, with telford and brick gutters; Eighteenth avenue, from South Tenth street to city line, with brick; Hill street, from Broad to Washington, with brick; Brill street, from Boneykamper avenue to Parsons avenue, with brick; Market street, from Bowery to Ferry, with granite on concrete; Jeliff avenue, from Gravelly avenue to Avon avenue, with brick; South Eighteenth street, from Fourteenth to Sixteenth avenues, with brick; George street, from St. Charles to Magazine street, with granite on concrete.

**Albany, N. Y.**—Council Committee on Streets and Sewers is considering Alderman Henchey's ordinances for paving Montgomery, Colonie and De Witt streets; ordinance has been passed for paving Plum street, between Franklin and Dollius streets; also fixing grade of Liebel street.

**Port Jervis, N. Y.**—The sum of \$5,000 has been voted for street paving.

**Rye, N. Y.**—Bids will be received for the sale of \$300,000 sewer, \$124,000 road improvement, \$40,000 fire house and \$15,000 dock bonds.—Chas. S. Towle, 5 and 7 East Forty-second St., New York City, Village Engineer.

**Syracuse, N. Y.**—Council has adopted ordinances declaring its intention to grade Oak street, Kyle avenue, Comstock place, Loomis avenue, Ostrander avenue and Cannon street; also to pave Temple street, from South Salina street to Onondaga creek, with asphalt or brick pavement.

The Board of Contract and Supply has voted to ask for bids for the repair of all defective asphalt pavement in the city.—Henry C. Allen, City Engineer.

**Alliance, O.**—The ordinance to pave Paterson street, at a cost of \$24,000, has passed Council; the improvement of Lincoln avenue by constructing a lateral sewer has been authorized; the improvement of a number of streets by sewers and paving is soon to be advertised.

**Ashland, O.**—A. P. Black, Clerk of the Village, will open bids as soon as plans are completed for paving Cottage street with brick or asphalt; also for improving West Eighth street.

**Barberton, O.**—L. C. Dibble announces the passage of a large number of paving resolutions as well as ordinances for paving and sewer work, together with curbing; these improvements are to be made in the spring.

**Bucyrus, O.**—Council has been asked to pave Marion street; plans for which will soon be prepared.

**Cambridge, O.**—A portion of Clark street and a portion of Market street are to be paved as soon as the City Engineer prepares the plans; an estimate of the cost of sewer on Wall avenue is to be prepared.

**Canal Fulton, O.**—An Engineer is soon to be employed to draft plans for the paving of a number of streets; Council has appointed Wm. Blank as Chairman of the Paving Committee, which is about to secure estimates of the cost of paving and sewerage.

**Cincinnati, O.**—Resolutions have been passed for resurfacing the following streets: With wood block: Beekman street, from Queen City avenue to north curb line of Fairmount avenue; Glenway avenue, from west line of Section 36, Storrs Township, to corporation line; Burnet avenue, from south curb line of Shillito street to south curb line of Forest avenue; Ludlow avenue, from east curb line of Brookline avenue to west curb line of Evans place; Kenner street, from west line of Freeman avenue to east line of Dalton avenue; and McMillan street, from east line of Gilbert avenue to east line of Woodburn avenue.

With asphalt: Longworth street, from west line of Plum street to the east line of Central avenue; Opera place, from the west line of Vine street to the east line of Elm street, excepting intersection of Race street; Post square, from west line of Elm street to the east line of Plum street; Auburn avenue, from Huntington place to Auburndale place; Eighth street, from the east line of Central avenue to the west line of Elm street; Shillito place, from the east line of Elm street to the west line of Race street; George street, from the east line of Mound street to the west line of Elm street, excepting intersections of John street, Central avenue and Plum street; Plum street, from the north line of Fourth street to the south line of Court street, excepting intersections of Fifth street, Seventh street, Eighth street, Ninth street and Sixth street; Gilbert avenue, from McMillan street to the northern terminus of asphalt improvement; John street, from Fourth street to Findlay street; Kemper lane, from Yale avenue to the south end of present asphalt improvement; Park avenue, from McMillan street to Chapel street; York street, from Linn street to Freeman avenue; Ninth street, from the west line of Central avenue to the east line of Freeman avenue, excepting the intersections of John street and Baymiller street; McMillan street, from May street to Gilbert avenue.

**Cleveland, O.**—The citizens, March 4, voted against issue of \$225,000 bonds for paving and street improvements; President W. J. Springborn, of the B. P. S., says, however, that money will be raised to pay the city's share in paving 100 streets.

**Coshocton, O.**—The residents of Cambridge road have started a movement to pave a large portion of that thoroughfare with macadam; the improvement will be made by the Board Commissioners.

**Dayton, O.**—Bids will be received, March 16, noon, for \$32,500 5 per cent., semi-annual bonds, to pay the city's share of the cost of improving certain streets, alleys and sewers.—Edward Philipp, City Auditor.



**Delaware, O.**—The City Solicitor is preparing the necessary legislation for the improvement of West Winter and Lincoln avenues; a crushed stone foundation is to be used instead of concrete.

**Jefferson, O.**—The Commissioners of Ashtabula County have voted to construct a two-mile strip of brick pavement, from the high level bridge at Conneaut, O., to the Pennsylvania State line; County Surveyor J. S. Matson, Jefferson, will prepare plans and specifications; the Commissioners also voted to improve the road between Rock Creek and East Trumbull.—P. C. Remick, Clerk.

**Madisonville, O.**—Bids will be received, March 25, for the purchase of \$13,329 5 per cent., one to ten-year street improvement bonds.—J. A. Conant, City Clerk.

**Massillon, O.**—Harold Howald, City Engineer, is preparing estimates for the costs of grading and paving Woodland avenue; the Board of Public Service has authorized the immediate preparation of plans for constructing a storm water sewer on half a dozen streets; the paving of Race street is also to be immediately arranged.

**New Lexington, O.**—Chas. A. Beard states that plans will probably be prepared for the paving of Jackson street, Walnut street, and three or four other streets of the village.

**Springfield, O.**—Council has passed an ordinance authorizing the Board of Public Service to contract for the labor and material for grading sidewalks, constructing vitrified stone sidewalks, curbs, gutters, crosswalks, alley and driveway intersections, and for furnishing, setting and resetting stone curbs, gutters and crosswalks required during the year ending December 31, 1908.

Council has passed resolutions declaring it necessary to grade, drain, curb and pave Center street, from Main street to Columbia streets, with vitrified brick or block, asphalt, bitulithic or granitoid block; also Pleasant street, from Center street to P. C. C. & St. L. Ry. bridge on Pleasant street; macadamizing roadway and constructing combined cement curb and gutters on Grand avenue, from Plum street to P. C. C. & St. L. Ry.—W. R. Burnett, Mayor; Wm. H. Mahoney, City Clerk.

**Toledo, O.**—Bids will be received, April 1, 7:30 p.m., for \$14,000 4 per cent., semi-annual bonds for paying the city's portion of the cost and expense of improving sundry streets, alleys and public ways by paving, repaving, grading and macadamizing, and by constructing sewers therein, and to pay the city's portion of the cost and expense of constructing such sewers.—Ames McDonnell, City Auditor.

**Youngstown, O.**—Council is soon to advertise for paving West Federal street, from Central square to North avenue.

Before paving and sewerage East Federal street it should be graded, according to Councilman Owens, of the Third Ward, who has suggested to Council that this improvement might be made at the expense of adjacent property owners; he desires that East Federal street at Basin be raised five feet; upon request of Mr. Owens, Engineer Lillie stated that this would be a big improvement to the city as a whole; the proposition was referred to committee in connection with the Engineer.

**Hazleton, Pa.**—The following improvement ordinances have been passed: Paving Church street, from Broad to Diamond, with brick, at a cost of \$18,000; paving North Wyoming street, from Maple to Diamond, at a cost of \$17,000, with brick; paving South Wyoming street, from Beach to Walnut, at a cost of \$7,000.

**Mars, Pa.**—Within the next few years the town will not only have a perfect sewer system and water supply, but it will have many paved streets and other improvements as well.

**Pittsburg, Pa.**—The Board of Public Works proposes to expend \$750,000 in paving this year.—John F. O'Toole, Superintendent of Highways.

**Scranton, Pa.**—Council has passed ordinances for paving Green Ridge street and Quincy avenue; plans and specifications are being prepared by the Director of Public Works for constructing a sewer in Orain Boulevard; ordinance providing for the opening of Lafayette street has been reported favorably by the Committee of Public Works.

**Central Falls, R. I.**—The City Engineer has presented to the Board of Aldermen an estimate of the cost of laying out and making the extension of Adams avenue from that thoroughfare to Cowden street. Sewers were ordered to be constructed on Rand street, from Rand to Pine street, and Mowry street; in Kendall street, from Pine street to the summit of the street; and on Ashley street, from Railroad street to Broad street.

**Paris, Tex.**—The citizens have voted \$60,000 street improvement bonds.—Address City Clerk.

**Waco, Tex.**—No contract was let for road work in McLennan County.—W. C. McCollum, County Auditor.

**Fond du Lac, Wis.**—Council is arranging to

pave certain streets with brick.—Address City Clerk.

**La Crosse, Wis.**—City Engineer Walter S. Woods is preparing plans for 5,000 square yards of brick paving, on concrete, and 20,000 square yards of macadam paving; bids will be asked for shortly.

**Milwaukee, Wis.**—City Engineer Poetsch has advertised for contracts for the erection of the superstructure of the Twenty-seventh street viaduct, connecting with Twenty-second avenue; the foundation is laid and the bridge must be ready by December 1, this year; it will cost \$200,000, and the money for it is available.

**Neenah, Wis.**—Council is preparing to pave certain portions of Wisconsin avenue with brick.—Address City Clerk.

**Toronto, Ont., Can.**—The following street improvements have been recommended by the City Engineer: Asphalt—Wallace avenue, \$20,164; Broadview avenue, \$5,912; Essex street, \$7,685. Bitulithic—Binscarth road, \$9,419. Brick—Howard Park avenue, \$14,446; Austin avenue, \$4,830.

## SEWERAGE

**Hot Springs, Ark.**—F. E. Ellsworth is Engineer for Sewer District No. 24, which is about to be built.—Address S. Schutlice, Collector.

**Oakland, Cal.**—The Board of Public Works has adopted recommendations of F. C. Turner, City Engineer, that city erect pumping plant to flush main lake sewer.

**Pasadena, Cal.**—The citizens have voted \$50,000 electric light and \$50,000 sewer bonds.—Address City Clerk.

**West Hartford, Conn.**—A. B. Alderson, Consulting Engineer, is preparing plans for the construction of the Park street sewer system, estimated to cost about \$30,000; the system will extend through several streets, and will have its outlet at the corner of Capitol avenue and Prospect avenue; the sewers will consist of vitrified pipe 8 to 15 inches in diameter; bids will be asked for as soon as the plans are perfected.

**Indianapolis, Ind.**—Plans and specifications are being prepared for the construction of a sewer three miles long, beginning in Morris and Division streets, West Indianapolis; also for sewer in Churchman avenue, and a sewer in Sugar Grove avenue; the Board of Public Works will ask for bids as soon as plans are completed.—Blaine H. Miller, City Engineer.

**Davenport, Ia.**—City Engineer Thomas Murray has made an estimate for the Sixth Ward sewer. There will be 5½ miles of sewer, as well as 2¾ miles of water mains. The improvements will cost \$50,000 altogether.

**Strawberry Point, Ia.**—Plans for a pumping station and a deep well for city are being prepared by M. Tschirgi & Son, Engineers, P. & I. Building, Dubuque.

**Vinton, Ia.**—Engineers M. Tschirgi & Son, B. & I. Building, Dubuque, Ia., are preparing plans for eleven miles of sewers for the city.

**Winfield, Kan.**—An ordinance has been passed providing for an issue of \$5,400 sewer bonds.—V. M. Guthrie, City Clerk.

**Havre de Grace, Md.**—Council has petitioned the Legislature for authority to issue \$30,000 bonds for constructing wharves and sewers.—Address City Clerk.

**Boston, Mass.**—Mayor Hibbard has signed an order for \$300,000 for sewer construction work.

**Detroit, Mich.**—Council has directed the Department of Public Works to advertise for proposals for construction of a vitrified crock lateral sewer.—J. J. Haarer, Commissioner.

**Aurora, Minn.**—The village sewer bonds, to the amount of \$20,000 and water extension bonds to the amount of \$5,000, have been sold to the Commercial Investment Company, the company's bid at 5 per cent. and commission to make them equal to 6 per cent. being the best by \$500. F. B. Myers, of Biwabik, was the nearest competitor. Work will be started on the sewers as soon as the bonds can be printed, and it is expected the complete system will be in by November 1. Engineer Dorway has the course all surveyed. There will be two main sewers of 20-inch tile, one each running up the alleys directly east and west of Jackson street. The laterals will be assessed to the property abutting.

**Red Wing, Minn.**—Council has ordered A. E. Rhame, City Engineer, to prepare plans for sewers on West avenue, from Sturtevant to Central street, on Seventh street, from McSorley to Bluff street, and on Seventh street, from Bluff to Wilkins street.

**Pascagoula, Miss.**—W. G. Kirkpatrick, C.E., Jackson, has been elected Engineer to prepare a city map and design and supervise the construction of sewerage system, water works and street improvements.—J. D. Clark, Chairman, City Improvement Committee.

**St. Joseph, Mo.**—Two propositions for sewer construction have been before City Council. One provides for the issuance of \$345,000

of bonds for extending main sewers. The alternative proposition provides for building only such sewers as are needed at the present time. The latter work would require expenditures of \$135,000.

**Roswell, N. M.**—The citizens have voted bonds for the construction of sewerage and water plant.—Address City Clerk.

**Rye, N. Y.**—The village will issue \$300,000 bonds for constructing sewers.

**Schenectady, N. Y.**—Ordinances directing the issuance of \$180,000 worth of 4½ per cent. sewer bonds and the procuring of a temporary loan of \$300,000 to meet the current expenses of the municipality have been adopted by Council; the sewer bonds will be issued April 1, and will mature beginning April 1, 1909; the money will be used for the extension of sewer mains throughout city.

**Maxton, N. C.**—Bids will be received, April 7, for the purchase of \$50,000 5 per cent., 30-year water and sewer bonds.—R. M. Williams, Mayor.

**Paulsboro, N. J.**—Mayor Adamson has asked County Freeholders for permission to lay a private sewer through the streets.

**Lancaster, N. Y.**—Village Board is to call for new bids for \$150,000 of bonds, proceeds of which will be used for constructing sewers; work will probably be done by day labor.

**Syracuse, N. Y.**—The Intercepting Sewer Board will advertise within 60 days for bids for constructing part of the big sewer.

A petition is before Council to construct a 12-inch pipe sewer in Boyden street, from Green street to Teall avenue.

**Ashtabula, O.**—The Board of Public Service is considering the advisability of installing a sewage disposal plant.

City Engineer Lewis A. Amsden has prepared a map for the outlet of a proposed sewer district to be placed in the Swedetown section of the city, draining Columbus and intersecting streets; a number of engineering feats will have to be arranged for; the right of way for the outlet across private property will be secured by the Board of Public Service.—A. J. Richardson, Clerk.

**Cincinnati, O.**—An ordinance is before Council authorizing an issue of \$60,000 bonds for the construction of sewers on the West Side.—Address City Clerk.

**Cleveland, O.**—Bonds, \$725,000, were voted, March 4, for sewers; over a mile of the big intercepting sewer, and many miles of main and intercepting sewers connecting with it will be built.—A. J. Callow, Secretary, Board of Public Service.

**Columbus, O.**—The Finance Committee is considering plans for the proposed Sullivan avenue sewer, estimated to cost \$60,000; also for \$25,000 bond issue for building the Markeson avenue sewer.—Thomas H. Clark, Chairman.

**Coshocton, O.**—Council will pave East street and will construct a sewer in Hamilton and Wilson avenues; the Engineer has made no report on the question of sewerage in the southwestern part of town.

**Eaton, O.**—The Riggs & Sherman Company will superintend the construction of the immense sewer plant to be erected here.

**Ironton, O.**—Council will employ an extra engineer to assist City Engineer Browne in the construction of the \$45,000 sewer system.

**Lorain, O.**—H. C. Glover has the contract for the construction of a sanitary sewer on Jones avenue, at \$1,632.

**Middletown, O.**—Council, at a special meeting, awarded \$4,059.40 of improvement bonds and \$2,000 of sewer bonds to the Provident Savings Bank and Trust Co., of Cincinnati.

**Oberlin, O.**—H. T. Marsh, Clerk, states that a bond issue for \$6,000 will be authorized for additional beds for the disposal plant.

**Salem, O.**—The city has purchased a tract of 23 acres of land about two miles northwest of this city, upon which will be erected during the coming summer a modern sewage disposal plant in accordance with the plans that were prepared a year ago by B. Morris French, City Engineer; it has also been decided to utilize a portion of the tract for a garbage disposal plant, plans for which will be prepared this spring by the City Engineer.

**Sandusky, O.**—Plans and estimates for the new sewer system have been submitted by Engineer King; to cost \$33,000.

**Springfield, O.**—Council is arranging to construct about thirteen sanitary sewers in various parts of the city; steps are also to be taken looking to the paving of Fisher street.

Council has adopted ordinances to proceed with the construction of 8-inch sanitary sewers in Pleasant street, between Linden avenue and Spring street, in Sewer District No. 19; Liberty street, between Limestone street and Clifton avenue, in Sewer District No. 18; Gallagher street, between Pleasant street and Clifton street, in Sewer District No. 18; and Pleasant street, between Center street and the first alley east of Winter street, and a connecting sewer in Winter street, between Pleasant street and Klizer street, in Sewer District No. 17. Also issue \$2,300

bonds for constructing a storm water sewer in Kenton street, between Kelly avenue and Central avenue, and in Central avenue between Pleasant street and Kenton street.—W. R. Burnett, Mayor.

**Alva, Okla.**—Plans and specifications are being prepared by Burns & McDonnell, Kansas City, Mo., for the construction of a sewer system.

**McKeesport, Pa.**—Elton D. Walker, Consulting Engineer for the State, recently made an examination of the proposed extension of the local sewer system, and upon his report the city may have to reconstruct its entire sewerage system and erect a sewage disposal plant; work will also be held up on the proposed Crooked Run and Patterson avenue sewers, contracts for which were recently awarded Bowman Brothers.—Thomas W. White, City Engineer.

**Mars, Pa.**—The voters, by a vote of 109 to 47, decided to issue bonds in the sum of \$10,000, the proceeds to be used in improving the water and sewer systems of the borough.

**Reading, Pa.**—S. Herbert Snow, Engineer of the State Department of Health, has endorsed the city's new disposal plant.

**Bennettsville, S. C.**—Plans for water and sewerage systems will be submitted by Frederick Menhall.

**Nashville, Tenn.**—The State Board of Trustees is discussing ways and means for installing a sewage filtering plant at the State Asylum.—Res. E. Folk, Secretary of Board.

**Hereford, Tex.**—An election will be held, April 7, to vote on the question of issuing \$20,000 water and sewer bonds.—Address City Clerk.

**Wichita Falls, Tex.**—The Attorney General has approved of an issue of \$24,000 sewer bonds.—Address City Clerk.

**Spokane, Wash.**—Estimates are being prepared for sewer system in the Fourth Ward.—Address Councilman R. L. Dalke.

**Walla Walla, Wash.**—Specifications for the construction of 3,000 feet new sewer, to be laid in Watertown Addition, are being prepared by J. B. Wilson, City Engineer.

**Plattville, Wis.**—Engineers M. Tschirgi & Son, E. & I. Building, Dubuque, Ia., are preparing plans for sewers for the city.

## WATER SUPPLY

**Prescott, Ariz.**—Arizona Power Company's engineers are now laying out the ground for the new power house at Fossil creek; by April 1, they fully expect to have placed contracts for all the work of the entire construction of the water works, power plant transmission line and sub-stations, and work will be proceeded with at once.

**Hope, Ark.**—Council has decided to expend \$72,000 in improving water system.—R. N. La Grone, Commissioner.

**Little Rock, Ark.**—W. H. Boone, 2601 West Fourth street, will purchase rotary well boring machinery.

**Oakland, Cal.**—City Engineer F. C. Turner has submitted a plan for a pumping plant at Harrison and Turnbull streets, to flush the sewer system.

**Redwood City, Cal.**—The city has voted to issue \$20,000 of bonds for improving water works.

**Vallejo, Cal.**—Bond issue for \$80,000 is proposed for securing new water supply for the city.

**Fort Collins, Col.**—The installation by the city of settling basin to cost \$2,000 at its works is under consideration.

**Greeley, Col.**—Miami Water Company has been incorporated, with a capital stock of \$50,000, by H. J. Houston, G. W. Houston and others.

**Hartford, Conn.**—The Committee of the Board of Fire Commissioners have recommended the purchase of 250 fire hydrants.

**Dublin, Ga.**—Council has secured plans and specifications for improving water system; bonds have been issued for the purpose.—Address City Clerk.

**Moultrie, Ga.**—The citizens will vote, March 23, on the question of issuing \$35,000 water works extension bonds.—Address City Clerk.

**Tifton, Ga.**—The city has disposed of \$30,000 of bonds, half of which will be used to complete water works.

**Centralia, Ill.**—Council has had plans prepared for improving the water system; estimated cost, \$20,000.—Address City Clerk.

**Ft. Wayne, Ind.**—The city administration has taken steps for the installation of a direct water system in the business section; specifications for new pipe for the Water Works Department have been prepared; a large number of extensions are to be made in the spring.

**Spencer, Ind.**—The Home Water Works Company has been incorporated, capital \$20,000, and will soon ask for bids for the construction and completion of a water works system in Spencer.—John R. Thomas, J. F. Lawson and J. H. Smith, Directors.

**Bade, Ia.**—Bond issue for \$6,000 for improving water works has been voted.

**Marshalltown, Ia.**—Plans have been re-

ceived by Council for elevated water tank, estimated to cost \$7,000.

**Meservey, Ia.**—Special election may be held to vote on issuing bonds for water works.

**Mayfield, Ky.**—The Mayfield Water and Light Company is arranging to rebuild its electric lighting system, and will lay about six miles of cast-iron water main.

**Springfield, Mass.**—E. E. Lochridge, Chief Engineer, has completed plans for a sedimentation basin and filter beds for the Water Department.

**Loch Raven, Md.**—The Maryland School for Boys will expend about \$20,000 for construction of system for supplying water and for road improvements.—Maurice Laupheimer, 601 Calvert Building, Secretary.

**Bay City, Mich.**—The Water Works Committee expects to ask for bids for water pipe within a short time, and Superintendent Dunbar, of the Department, is preparing the specifications as to size, etc.; it is expected to lay about three miles during the coming season; although that amount will by no means satisfy the demands that have been made through petitions; the Committee cannot go beyond the income of the system, and must work with the amount received each year.

**Buffalo, Minn.**—Estimates are being prepared for water system.—Address City Clerk.

**Buelah, Miss.**—Council has directed estimates to be secured for proposed water system.—J. S. Gant, Mayor.

**Oxford, Miss.**—Bids will be received, March 21, for the purchase of \$15,000 6 per cent. light and water bonds.—R. S. Adams, Mayor.

**Pascagoula, Miss.**—W. G. Kirkpatrick, C.E., Jackson, has been elected Engineer to prepare plans, etc., for water works.

**Wanoo, Neb.**—An ordinance is before Council authorizing an issue of bonds for the construction of water plant.—Address City Clerk.

**Weston, Neb.**—An election will be held to vote on the question of issuing bonds for light and water systems; this is the third election to be held, two having been lost by small majorities.—Address City Clerk.

**Albany, N. Y.**—Secretary Wachsmann, of the Board of Contract and Supply, has been directed to advertise for 200 tons of cast-iron pipe for the water works and for oil for the water works.

**Buffalo, N. Y.**—Ordinances providing for relaying and enlarging various water mains for the purchase of a site for the Kensington water tower, and for the construction of a valve system and valve house, have been adopted by Council.—Francis G. Ward, Commissioner of Public Works.

**New York, N. Y.**—A filtration plant may be constructed at Jerome Park, the Department of Water Supply, Gas and Electricity having decided upon this improvement in the water supply.—John H. O'Brien, Commissioner.

**Asheville, N. C.**—Council has under consideration the establishment of a meter system.—Address City Clerk.

**Amherst, O.**—Council favors the construction of a water works system, and at the suggestion of George Hollstein, representing the School Board, Engineer Trent, of the Knox Syndicate, has been authorized to look over the ground and report on the best manner of securing a supply.

**Barberton, O.**—The Board of Public Affairs in session with the Water Committee of Council recently formed some radical plans for the improvement of Barberton's water supply and the extension of the present system. A plan was devised to extend the water system through the entire west end of town, at a cost of from \$15,000 to \$20,000; the Village Engineer, H. W. Alcorn, will make a plat of all the streets in West Barberton not now supplied with water, and it is roughly estimated that it will be necessary to install four miles of water pipes.

**Lewisburg, O.**—This place has voted to build a new water works system.

**Newton Falls, O.**—The proposition to issue bonds in the sum of \$20,000 for the installation of a water works system carried by a vote of 191 to 3.

**Sandusky, O.**—Council has decided to make an additional appropriation of \$25,000 for the completion of the filtration plant.

**Toledo, O.**—Bids will be received, April 1, 7:30 p.m., for \$230,000 4 per cent., semi-annual bonds for extending, enlarging and improving the water works.—Amos McDonnell, City Auditor.

**Wauseon, O.**—The Board of Public Affairs writes us that they are not considering water purification, and that their water works plant is in excellent condition. The reverse was stated in the daily press, which was our authority for the note published in these columns, February 12.

**Youngstown, O.**—Two hundred and four acres of the land needed for the Berlin reservoir were formally ordered purchased by an ordinance of Council. The amounts of money, aggregating \$11,299 of the \$15,000 appropriated to be paid each of the three property owners, were designated.

Director J. Edgar Rudge, of the Board of Public Service, with W. S. Hamilton, Super-

intendent of the Water Works, made an inspection trip over all streets where it is proposed to lay water mains. The amount of pipe to be laid will be estimated and preparations for laying the mains as soon as possible will be made; just as soon as the ground thaws sufficiently the work will be started.

**Tulsa, Okla.**—The city has accepted a proposition from the water company to sell their plant for \$17,200.

**Franklin, Pa.**—Citizens will vote, on April 18, regarding the acceptance of the Venango Water Company's terms for sale of plant.

**Mars, Pa.**—The proposal to issue \$10,000 bonds for the construction of water works and a sewer system was approved by a vote of 109 to 47.

**Pottstown, Pa.**—The Pottstown Water Company, in the near future, will begin the erection of a filtering plant and the making of other improvements, whose aggregate cost will be \$150,000.

**Reading, Pa.**—The Sinking Fund Commission has decided to offer for sale \$500,000 filtration bonds, recently authorized by a vote of the people.—Address Secretary of the Commission.

**Wessington Springs, S. D.**—The city has voted to issue \$23,000 of bonds for water works purposes.

**Summit, S. D.**—The question of issuing bonds for the construction of a light and water plant will be submitted to a vote of the people.—Address City Clerk.

**Beaumont, Tex.**—The Beaumont Water Works Company has decided to issue \$500,000 bonds for refunding and improvement purposes.—Donald G. Moore, Secretary.

**Cisco, Tex.**—Bids will be received at any time for the purchase of \$16,000 water works extension bonds, payable in 40 years, redeemable in 30 years; interest 5 per cent.—G. D. Ward, City Clerk.

**Hereford, Tex.**—Council has directed plans to be prepared for putting in water system.—Address City Clerk.

**Waxahachie, Tex.**—The Attorney General has approved of an issue of \$1,900 water works repair bonds.—Address City Clerk.

**Cape Charles, Va.**—Council will petition the Legislature for authority to issue \$30,000 water works and public improvement bonds.—Address City Clerk.

**Urbana, Va.**—The city will have installed a water works system, consisting of 15,000-gallon tank on 50-foot tower, gasoline engine, 4-inch mains and fire plugs.

**Chehalis, Wash.**—Council is inquiring for the services of an engineer to survey the route of the proposed gravity water system.

**Spokane, Wash.**—City Engineer J. C. Ralston has prepared preliminary plans for a standpipe to be erected at Manite Park, at a cost of \$17,200.

**Wheeling, W. Va.**—Council is considering an ordinance for a \$1,000,000 issue of bonds, of which \$500,000 is to be expended on a water works system and filtration plant.

## LIGHTING AND ELECTRICITY

**Guntersville, Ala.**—The Guntersville Electric Light and Power Company will establish an electric light plant; the building is erected, but machinery has not been purchased.—V. V. Moore, Manager.

**Pasadena, Cal.**—The citizens have voted \$50,000 bonds for municipal lighting plant extension.—Address City Clerk.

**Redlands, Cal.**—C. S. Chesnut is organizing a consolidated gas and electric company; the proposed company will be capitalized at \$1,000,000, and will furnish electricity to Redlands, San Bernardino, Colton, Highgrove, Crestmore and gas to these cities and to Riverside; the independent companies of Redlands, Colton, San Bernardino and Riverside will be taken into the new company, which will be known as the Consolidated Gas and Electric Company.

**Bridgeport, Conn.**—An appropriation of \$55,284 has been made for the electric and gas lights now in use, and \$944.70 for new electric lights and \$300 for additional gas or gasoline lights.

**McHenry, Ill.**—The city may be provided with electric lighting, as Messrs. Page & Howell are negotiating with the McHenry Electric Light, Heat and Power Company for the purchase of their wire and poles here and in case the deal goes through the poles and wires of that company will be used, while the balance of the plant will consist of the latest improved machinery, and it is quite likely that a new building will be erected, to be occupied by the plant.

**Mt. Vernon, Ind.**—Council is to advertise for bids on April 1 for lighting the streets for a term of ten years.—Henry Kling, City Clerk.

**Des Moines, Ia.**—A private gas plant for the Park avenue community may be built near a new south side coal mine this summer; Attorney Edwin Proctor was commissioned to get estimates on a small gas plant and he will report soon to the Park Avenue Improvement Club.

**Iola, Kan.**—Plans and specifications are being prepared by John Stanton, State



Architect, Topeka, for the power plant to be built at the State University, at a cost of \$50,000; the mechanical laboratories of the Engineering School will be housed in this building.

**Sterling, Kan.**—Council has under consideration the establishment of a municipal lighting plant.—Address Mayor Fair.

**Louisville, Ky.**—The Louisville Lighting Company will expend about \$1,500,000 for improvements.—A. M. Worthington, Louisville, Manager.

**Owensboro, Ky.**—Council has decided to increase the capacity of the electric plant.—Address City Clerk.

**Easton, Md.**—An election will be held April 2 to decide the question of issuing \$30,000 bonds for electric lighting plant.—Address City Clerk.

**Springfield, Mass.**—The United Electric Co. will expend \$50,000 this year for underground conduits in the Forest Park section. Work is to be started as soon as possible this spring. W. L. Mulligan, 133 State street, Springfield, is Manager. It is also reported that the Postal Telegraph Co. will have to place its wires in Belmont avenue underground.

**New Bedford, Mass.**—A joint special committee has been appointed to investigate relative to a municipal lighting plant; Mayor Bullock appointed Aldermen Winsper and Washburn, who will act with Councilmen Livesey, Mahoney and McClure.

**Greenville, Mich.**—R. J. Tower, owner and operator of the R. J. Tower Iron Works, has secured a thirty-year franchise for furnishing electric light and power, both for commercial and domestic use in this city.

**Marquette, Mich.**—The Board of Light and Power Commissioners has decided to build a substation on Bluff street, in accordance with the recommendation of C. W. Humphrey, of Chicago, Ill. The cost of the building, including machinery, is estimated at \$12,000.

**Port Huron, Mich.**—The question of establishing a municipal lighting plant will be submitted to the voters in April.

**Crookston, Minn.**—The Crookston Water Works, Power and Lighting Company intends to construct a dam eleven miles north-east of this city, and has purchased a site comprising more than 1,000 acres. E. Peterson is Superintendent, Crookston.

**Linneus, Mo.**—Bids will be received March 15 for \$3,500 5 per cent. electric bonds, for rebuilding light plant, which was burned. H. E. Synos, City Clerk.

**Charleston, Miss.**—W. C. Myers will construct an electric lighting plant here and will need equipment for same.

**Waynesboro, Miss.**—The city will build a water-power electric light plant, for which \$12,000 of bonds were recently voted. An engineer will make plans and specifications for dam, machinery, etc., and bids will be advertised.—J. R. Huggins, Clerk.

**Culbertson, Neb.**—A movement is on foot to establish an electric lighting plant in the near future; it is proposed to dam the Frenchman at this place and thereby secure the necessary power for operating the plant.—Address Geo. V. Eisenhart.

**Lincoln, Neb.**—The Western Gas Construction Co., Ft. Wayne, Ind., has the contract for erecting a water gas plant.

**Wahoo, Neb.**—Council has passed the necessary ordinances for the voting of water and electric light bonds for the installing of a new system of water and light plant for the city.

**Concord, N. H.**—The Concord Electric Company is contemplating the construction of a steam plant to be used as an auxiliary to the Sewall's Falls power plant. It is expected to have the plant installed and ready for operation by next fall.—George B. Lauder, Superintendent and Chief Electrician.

**Albany, N. Y.**—Council has passed Alderman Walsh's ordinance providing for 100 additional electric lights.

**Ithaca, N. Y.**—The Building Committee of the Board of Supervisors is considering a plan to install an acetylene gas plant at the Court House to furnish light for the building and the jail.—Address County Auditor.

**Syracuse, N. Y.**—The city will advertise at once for street lighting, and as the Syracuse Lighting Company has the only franchise it will probably be awarded contract for five years, at the old price.

**Greensboro, N. C.**—The Greensboro Electric Co. will expend \$75,000 in construction of belt line gas main around city and enlargement and reconstruction of gas house.—Ernest Gonzenbach, Manager.

**Minot, N. D.**—A stock company is being organized for the purpose of erecting a new power plant; the company intends to erect a power house and plant that will accommodate the needs of the entire city.—Address J. A. Brunner.

**Cincinnati, O.**—The village of Madisonville is to have a fully equipped electric lighting plant; about \$10,000 will be expended.

**Cleveland, O.**—The Rocky River Water,

Light and Power Company has raised its capital from \$100,000 to \$250,000, and will install a new lighting system in the village of Rocky River.

**Columbus, O.**—The Service Board has notified Chairman Clark of the Finance Committee of Council that it will submit for passage by that body an ordinance authorizing an issue of another \$40,000 bonds for use at the light plant in the way of providing needed equipment; included in this equipment is the amount needed for the additional lamps, which the old service board promised from the previous bond issue of \$40,000, coal crusher outfit, rearrangement of the coal conveyor, installation of necessary meters to gauge working results, and other apparatus.

**Dayton, O.**—The people of Cedarville have voted in favor of a bond issue for constructing an electric lighting plant for the village.

**Youngstown, O.**—A proposition to utilize the power of Mill Creek for lighting Mill Creek Park is being considered.

**Marshfield, Ore.**—The Coos Bay Gas and Electric Company will commence work soon on the construction of an electric plant at Porter to supply electricity in both Marshfield and North Bend for lighting and manufacturing; the present plants in both towns will be held as emergency stations.—S. H. Bell, Manager.

**Summit, S. D.**—The Town Board is considering estimates for light and water system.—Address City Clerk.

**Knoxville, Tenn.**—The Acme Electric Company has increased its capital stock from \$5,000 to \$20,000.

**Dallas, Tex.**—Dallas is about to install a system of gas lighting in the residence district.—Commissioner Wm. Doran can be addressed.

**Fort Worth, Tex.**—The city will improve its electric light plant so as to furnish about 900 additional arc lights; about \$50,000 will be expended for new machinery.—Samuel Davis, City Commissioner.

**Hereford, Tex.**—Council has passed an ordinance granting a franchise to Obethier & Meadows to erect an electric power plant and supply the city with lights.

**Navasota, Tex.**—The R. A. Horlock Company has secured franchise and will install machinery for furnishing electric lights. The equipment will include 250-h.p. Corliss engine, 120-kw., 3-phase, 60-cycle alternating and a duplicate 50-kw. direct-connected generator, marble switchboards, transformers, etc.—R. W. Horlock, Manager.

**San Angelo, Tex.**—San Angelo Traction Company will install electric power plant for street railway; will erect brick building 38x52 feet; bids not yet received.—J. H. Ramsom, President.

**Abington, Vt.**—A new electric lighting system will be installed for lighting the Washington County Court House.—Address County Auditor.

**Suffolk, Va.**—F. D. Moses has the contract for completion of the Suffolk Gas Works.

**Monroe, Wis.**—Council has appointed a committee to investigate the matter of improving the street lighting system.—Address E. F. Bauman.

**Osceola, Wis.**—C. C. Ladd is considering bids for electric machinery for a lighting plant.

**Viola, Wis.**—E. R. Cushman is preparing plans for a light and power plant to cost from \$15,000 to \$20,000.

**Quebec, P. Q.**—The Municipal Council, on February 14, passed a bylaw acquiring the property, business assets and rights of the Sherbrook Power, Light and Heat Company, and to assume its debt of \$80,000. A cash payment of \$170,000 is to be made.—L. C. Bachand, Manager.

## FIRE EQUIPMENT

**Grass Valley, Cal.**—Arrangements are being made to secure an electric fire alarm system.—Address City Clerk.

**San Rafael, Cal.**—A committee has been appointed to secure improved fire protection; it is proposed to expend \$12,000 in building and equipment.—Henry C. Geiske, Secretary of the committee.

**Bridgeport, Conn.**—The Fire Department has petitioned for the purchase of an aerial truck.—Address City Clerk.

**Plainville, Conn.**—The town has voted to install an electric fire alarm service.

**Dublin, Ga.**—Bonds have been authorized for establishing a fire alarm system and improving the electric light plant.—Address City Clerk.

**Homer, Ill.**—A committee has been appointed to purchase fire engine.—Address H. N. Smoot.

**Clinton, Ia.**—Architects J. H. Morrell & Son have completed plans for a two-story fire station for this city; cost, \$10,000.

**Ft. Wayne, Ind.**—Money has been appropriated for the purchase of fire engine for engine house No. 4.—Address City Clerk.

**Baudette, Minn.**—A fire company has been organized.—J. R. Dundas, Chief.

**Syracuse, N. Y.**—The Board of Contract and Supply has authorized the construction of new engine house for No. 6 company and the water tower; also for furnishing new hose wagon for the Bureau of Fire.—John P. Quigley, Chief, Fire Department.

**Carpio, N. D.**—The matter of fire protection is being agitated.—Address City Clerk.

**Dickey, N. D.**—Bonds, \$1,700, have been appropriated for the purchase of fire apparatus.—Address City Clerk.

**Grano, N. D.**—Council proposes to establish fire protection.—Address City Clerk.

**Rye, N. Y.**—The village will issue \$40,000 bonds for erecting fire houses.

**Syracuse, N. Y.**—Architects Gaggin & Gaggin have completed plans for an engine house for Company No. 6, at South Clinton and West Jefferson streets; exterior red brick work, sandstone trimmings; accommodation for nine horses on the floor; on the second story will be bedrooms and on the third a handball court; tar and gravel roofing, steam heat plant and complete ventilating system.

**Alliance, O.**—Fireman Ed. Held has prepared plans, under the supervision of Chief U. S. Augst, for a sub fire station, to be built at Mt. Vernon; it will be of brick and constructed on the cottage style; steps will shortly be taken by the Board of Public Safety for the erection and equipment of the station.

**Toledo, O.**—Bids will be received April 1, 7.30 p. m., for \$20,000 of the \$30,000 issue of 4 per cent. semi-annual bonds, issued for purchasing real estate and erecting and equipping fire engine house, near Detroit and Central avenues.—Amos McDonnell, City Auditor.

**Wyoming, O.**—Architects Garber & Woodward, Cincinnati, are preparing plans for an \$8,000 two-story fire house for the Village of Wyoming.—Joseph Kirby, Mayor.

**Harrisburg, Pa.**—The Fire Committee of Councils has authorized the purchase of a lot of land for a new fire house for the Camp Curtin Fire Company, at Sixth and Ross streets.

**Pittsburg, Pa.**—Architect H. C. Hodgins has prepared plans for a two-story engine house in the Thirty-second Ward for the Board of Public Safety; cost, \$30,000.

Architect H. C. Hodgins has prepared plans for a \$45,000 2-story engine house and police station in the Eighteenth Ward, for the Board of Public Safety.

**Wilkes-Barre, Pa.**—A resolution for the purchase of an aerial truck has passed Council.

**Providence, R. I.**—The Board of Fire Commissioners has voted to ask for 50,000 feet of fire hose and automobiles for the Chiefs.

**Montreal, Que.**—The Fire and Light Committee recommends an appropriation of \$6,500 for the purchase of fire alarm equipment, to be installed in the Berthelet street fire station.—Address Secretary.

**Windsor, Ont., Can.**—Council proposes to expend \$6,500 in purchasing fire engine.—Address City Clerk.

## PUBLIC BUILDINGS

**Booker City, Ala.**—Tenders will be received for the erection of a frame prison building near Booker City; certified check, \$250; bond, \$5,000; plans, etc., at Room 330, Woodward Building, Birmingham.

**Elyton, Ala.**—An election will be held to vote on the question of issuing \$25,000 school bonds.—Address Clerk of the Board of Education.

**Montgomery, Ala.**—Architect Edward Okel, Jr., has prepared plans for brick, steel and stone hospital building, 160x80 feet, for the Montgomery Infirmary and Charity Hospital.

**Little Rock, Ark.**—Architect Edward L. Tilton, New York City, has completed plans for a one-story library building for the Carnegie Library Committee, Mr. Wellman, Librarian, Little Rock; cost, \$80,000.

**Washington, D. C.**—Marsh & Peter will prepare plans for a two-story school building for the Board; \$100,000.

**Augusta, Ga.**—Architect L. F. Goodrich, 122 Eighth street, is preparing plans for a four-story City Hall building, 150x200 feet; stone, concrete floors, hard plaster, gas and electric fixtures, mantels, lavatories, water closets, etc.; cost, \$350,000.—Wm. L. Martin, Secretary Committee.

**Bloomington, Ill.**—The Park Commissioners, J. B. Stevenson, Chairman, are planning a new bath house for Miller Park, to cost \$2,000.

**Cairo, Ill.**—The citizens have voted \$30,000 bonds for school purposes.—Address Secretary of the School Board.

**Chicago, Ill.**—At the April election, the question of issuing \$2,000,000 bonds for the construction of new Infirmary Building in Cook County will be submitted to a vote.—Edward Haas, County Clerk.

**Mishawaka, Ind.**—Architect H. H. Richards, Chicago, Ill., has completed plans for two school buildings for the School Board.

**New Augusta, Ind.**—Plans are being prepared for a brick high school, to cost \$15,000.—H. E. Hill, Trustee.

**Des Moines, Ia.**—Architects Smith, Wetherell & Gage have prepared plans for north and east wings to the Mercy Hospital; cost, \$65,000.

It has been stated by the firm of Proudfoot & Bird, Architects, Crocker Building, Des Moines, that no time has been set for receiving bids for the proposed City Hall. As planned, the building will have three stories.

**Modale, Ia.**—Architects Elsentraut Company have prepared plans for a two-story public school building for the Board of Education; cost, \$7,000.—E. A. Drake, Secretary.

**Onawa, Ia.**—Architects Patton & Miller, Chicago, Ill., are making plans for a library building for the Carnegie Library Association and Judge A. Oliver; cost, \$20,000.

**Atchison, Kan.**—Saylor & Seddon, Kansas City, have plans for a three-story high school building and plans for remodeling the Franklin school building for the Board of Education; cost, \$10,000.

**Lawrence, Kan.**—Architect W. T. Wellman, Lawrence, and F. C. Gunn, Kansas City, Mo., are preparing plans for a two-story jail and sheriff's residence, 48x65 feet, for Douglas County; ashlar and cut stone, iron, steel, brass, bronze and wire work, concrete floors, gas and electric fixtures, plate glass, wood mantels, bath tubs, lavatories and water closets; cost, \$25,000.

**Nortonville, Kan.**—An election will be held to vote on the question of issuing \$5,000 bonds for the erection of City Hall.—Address City Clerk.

**Lawrence, Mass.**—Architect John Ashton has been selected to prepare plans for a grammar school building for the School Board; estimated cost, \$85,000. Address John Plane, Mayor; Bernard H. Sheridan, Superintendent of Schools.

**Springfield, Mass.**—Architect B. Hammett Seabury has made plans for a sixteen-room primary school house.

**Comstock Park, Mich.**—Proposals will be received by John B. Jenkins, Secretary Building Committee, for the construction, including heating and ventilating, of a four-room brick school building; plans, etc., at office of Secretary.

**Detroit, Mich.**—Architect Louis Kamper has let general contract to Otto L. Misch for a two-story and basement police station for the Board of Police Commissioners.—Chas. A. Nichols, Secretary.

**Kalamazoo, Mich.**—An election will be held March 16 to vote on the question of issuing \$60,000 bonds for the construction of school house.—Address Clerk of the Board of Education.

**Sturgis, Mich.**—Two sets of plans have been submitted for the Carnegie Library building, which will cost about \$8,000.—A. L. Hibbard, City Clerk.

**Winona, Minn.**—The Winona County Board contemplates remodeling the present jail or erecting a new building; cost, \$25,000.—Joseph Winczewski, County Auditor.

**Bloomfield, Mo.**—Architects P. H. Weathers & R. A. Curtis, Kansas City, have prepared plans for a two-story Court House for Stoddard County; cost, \$35,000.—J. M. Punch, County Clerk.

**St. Louis, Mo.**—Architects James S. Smith and Dr. Faulkner have prepared plans for a three-story police station for the Board of Police Commissioners; cost, \$50,000.

Architect H. W. Powers has prepared plans for a two-story public bath house for the Park Commissioners; cost, \$30,000.

**Sikeston, Mo.**—Architects Matthews & Clarke, St. Louis, has let general contract to Frank Heiser for a jail for the city.—Dr. Malone, Mayor.

**Beatrice, Neb.**—The Board of Education contemplates the erection of a high school building, to cost \$80,000.

**Nebraska City, Neb.**—The matter of issuing \$40,000 bonds for the erection of school house is under consideration.—Address City Clerk.

**Omaha, Neb.**—At the spring election the question of issuing bonds for the erection of Court House will be submitted to the voters of the county.—Address County Auditor.

**Hoboken, N. J.**—Council has invited bids for a plot of ground within three blocks of the City Hall for the construction of new police station.

**Kearny, N. J.**—Bonds, \$62,000, have been authorized for school purposes.—Address Clerk, Board of Education.

**Mullica, N. J.**—Architect C. R. Peddle, Philadelphia, has completed plans for a two-story school building for the School Board, care E. T. Ridgway, Mullica Hill.

**Passaic, N. J.**—Architect John F. Kelly, Postoffice building, is receiving estimates

for a two-story nurses' home, 35x45 feet, at Boulevard, Lafayette and Maple streets, for the Passaic Hospital Association; brick, gas and electric fixtures, water closets and lavatories; cost, \$10,000.—Wm. L. Lyall, Chairman, 349 Ayergriff avenue.

**Paterson, N. J.**—The Board of Education, Mr. Kearns, Chairman Building Committee, contemplates erecting a school building in the down-town section.

**Buffalo, N. Y.**—Bids were opened February 27 by Comptroller Zimmerman for a site for the new Municipal Building, or courthouse, and several very likely sites were offered.

**Port Washington, L. I., N. Y.**—Architects Ralph E. Dushner and F. F. Cornell, New York City, are preparing plans for a three-story school building for the Board of Education; cost, \$75,000.

**Rockaway Beach, L. I., N. Y.**—Architects W. F. Kennedy Co., 462 Boulevard, have prepared plans for a proposed hospital to be erected by public-spirited citizens; it will be two and one-half stories, built of brick.

**Morgantown, N. C.**—Architects Barrett & Thompson, 117½ Fayetteville street, Raleigh, have prepared plans for a \$20,000 nurses' home for the State Hospital Commission.—Dr. John McCampbell, Superintendent.

**Hatton, N. D.**—Bonds, \$12,500, have been voted for the erection of school house.—Address Clerk, Board of Education.

**Columbus, O.**—Architect F. L. Packard has completed plans for two two-story dormitory buildings for the Tuberculosis Hospital for the Commissioners of Franklin County; total, \$9,000; he is also completing plans for a two-story administration building for the Tuberculosis Hospital and plans for a one-story tuberculosis hospital, dining hall and kitchen for the Commissioners of Franklin County; cost, \$23,000 and \$6,000, respectively.

The Grant Hospital Company is having plans made for a six-story addition to the Grant Hospital; cost, \$200,000.

**Cuyahoga Falls, O.**—Council will advertise for bids for a steam heating plant to be installed in the Town Hall, costing \$1,000.

**Delta, O.**—Architect George E. Mills, Toledo, has completed plans for a four-room addition to school building for the School Board.

**East Cleveland, O.**—Architect Searles, Hirsch & Gavin, Cleveland, have prepared plans for a school building for the School Board.

**Lancaster, O.**—Architects Richards, McCarty & Bulford, Columbus, are preparing plans for a two-story hospital building for the Board of Public Service; cost, \$35,000.

**Oklahoma City, Okla.**—An election will be held in April to vote on the question of issuing \$75,000 bonds for the erection of additional school houses.—F. J. Merrill, president School Board.

**Abington, Pa.**—Heacock & Hokanson, Philadelphia, have about completed plans for a two-story school building for the School Board, care Dr. A. W. Baggs; cost, \$50,000.

**Butler, Pa.**—Architects Thomas W. Boyd & Co., Pittsburg, will receive bids about in March for a three-story hospital building at Butler, which is estimated to cost about \$20,000.

**Darlington, Pa.**—Cope & Stewardson, architects, 320 Walnut street, Philadelphia, are completing plans for several buildings to be erected at Darlington, Delaware County, for the new House of Refuge for Girls. The proposed buildings will cost about \$150,000, with provision for additions to make a total of \$300,000. It is intended to ultimately build about eighteen cottages, to accommodate thirty girls each. The cottages will be T-shaped, measuring about 90x25 feet, with a rear central wing about 25x45 feet.

**Homewood, Pa.**—Architect E. V. Kerner, Pittsburg, has plans ready for bids for a three-story, sixteen-room school addition for the School Board; cost, \$100,000.

**Mercer, Pa.**—Architects Owsley & Boucherle, Youngstown, have been selected to prepare plans for the Court House at Mercer; cost, \$200,000.

**Philadelphia, Pa.**—Architect E. L. Tilton, New York City, is preparing plans for a two-story branch library building for the Free Library of Philadelphia.

**Pittsburg, Pa.**—A. B. Shepherd, Director of the Department of Public Works, has submitted preliminary plans to Councils for the erection of a market-house on Market street. The building will be three stories in height, will be of brick, stone and concrete, and will cost about \$900,000.

The Trustees of the West Penn Hospital Association are having competitive sketches made for a hospital building; cost, \$500,000.

Architect H. C. Hodgkins has prepared plans for a two-story police station and engine house, in the Eighteenth Ward, for the Board of Public Safety; cost, \$40,000.

Architects Robinson, Winkler & McDonald are preparing plans for the School Board of Chartiers township; cost, \$25,000.

**Warren, R. I.**—Plans made by Architect R. C. N. Monahan, 255 Main street, Pawtucket, have been accepted for a four-room school building in the Parker district.—C. H. Persons, Superintendent.

**Mitchell, S. D.**—The citizens have voted \$19,000 bonds for the erection of school house.—Address Clerk, Board of Education.

**Wessington Springs, S. D.**—Architects Elsentraut Company, Sioux City, Mo., are preparing plans for a two-story public school building, 76x68 feet; press brick, stone and granite, steel work, concrete floors, hard plaster, electric fixtures and water closets; \$25,000. The same firm has also prepared plans for a three-story administration building, 54x76 feet, for the Wessington Springs Seminary; press brick, stone and granite, steel work, concrete floors, hard plaster, electric fixtures and water closets; cost, \$25,000.

**Houston, Tex.**—All bids have been rejected for the construction of the United States public building here; new bids will be received under revised specifications, providing for a larger building.—James Knox Taylor, Supervising Architect, Treasury Department, Washington, D. C.

**Seguin, Tex.**—The Attorney General has approved of an issue of \$6,000 bonds for erecting City Hall and fire station.—Address Mayor Sorn.

**Richmond, Va.**—Architects Noland & Baskerville, Chamber of Commerce Building, and E. G. Frye, Lynchburg, are preparing plans for improving and enlarging State Library building, at Richmond; \$85,000 is to be appropriated.

**Bluefield, W. Va.**—Bids will be received March 21 by the Beaver Pond School District for the purchase of \$150,000 6 per cent. school bonds.—Address E. L. Bowman, Secretary, Board of Education.

**Wautoma, Wis.**—Wausara County will build a jail; plans have been submitted, but none as yet have been adopted.—W. B. Stillwell, County Clerk.

## ELECTRIC RAILWAYS

**Chico, Cal.**—Northern Electric Company has completed surveys for an extension of the line from Chico northward through Red Bluff and Redding to Kennett, and construction work will be undertaken shortly.—C. S. Compton, Chief Engineer Northern Electric Co.

**Atlanta, Ga.**—Atlanta and Carolina Railroad Company has awarded contract to Cook & Lowry of Montgomery, Ala., to build the line within the city limits of Atlanta; work of construction will begin within sixty days.

**Augusta, Ga.**—Work is to be started shortly by the Augusta and Columbia Railway Company on the extension of the Augusta-Alken electric line from Alken to Columbia.—James U. Jackson is interested.

**Fitzgerald, Ga.**—C. A. Holtzendorf, Secretary and Treasurer of the Fitzgerald and Ocilla Electric Railway and Power Company, Fitzgerald, informs us that right-of-way has been secured for the proposed line. It will be fourteen miles in length and will be constructed in the city of Fitzgerald and from Fitzgerald to Ocilla. Surveys are not made.—S. Tilden Holtzendorf, President, 118 East Sixteenth street, New York.

**Quitman, Ga.**—The Quitman, Thomasville & Valdosta Electric Street Railway and Power Company, was granted a franchise and the exclusive rights of the principal streets of Quitman at a recent meeting of the Council.—A. C. McLeod, President.

**Red Oak, Ia.**—H. L. Deemer, who is interested in the construction of an electric railway from Red Oak via Greenfield to Des Moines, can be addressed in regard to the services of first-class engineers to prepare plans, etc., for railroad.

**Topeka, Kan.**—Application has been made to the Secretary of State for a charter for an electric railway line between Kansas City, Mo., and Topeka, capital, \$10,000,000, by E. M. Lambkin; Lambkin paid \$5,000 charter fees, although the charter has not yet been granted.

**Shreveport, La.**—The Shreveport Suburban Railway Company, capital \$50,000, has filed its charter for an electric line. Work has begun.—John Lorenz, President; J. B. Atkins, Secretary Treasurer.

**Annapolis, Md.**—A bill was introduced in the Senate by Senator Claggett to incorporate the Washington and Maryland Electric Railway Company. The capital stock is to be \$25,000 and the road will run from Washington to Ritchie Station, on the Chesapeake Beach Railroad, a distance of ten miles. The incorporators are Horace Crozier, Samuel C. Cox, T. Van Claggett, Snowden Hill, Alfred G. Shaw, Ernst Gerstenberg and Albert Carey.

**Des Moines, Ia.**—Meeting for the promotion of the proposed Des Moines, Winterset & Creston Interurban Railway has been held at the Commercial Club, Milo Ward, Secretary. A considerable amount of stock has already been subscribed for.



**Jefferson, Ia.**—Business men have subscribed \$2,300 toward the promotion of a new interurban railway from Jefferson.—Henry Haag, Cashier of the City Bank, is interested.

**Sac City, Ia.**—Preliminary steps have been taken here for securing an interurban railway from Perry to Sioux City, via Lake City, Sac City and Storm Lake. The following officers were appointed to promote the matter: President, S. M. Elwood, Sac City; Vice-President, H. M. Miller, Fort Dodge, Ia.

**Crawfordsville, Ind.**—Right of way is being secured and preliminary surveys will be made shortly for the proposed new Kokomo, Frankfort and Terre Haute traction line. Ex-Judge J. V. Kent, Frankfort, Ind., is interested.

**Fort Wayne, Ind.**—Fort Wayne & Springfield Railway Co., Decatur, Ind., is now considering plans for the southern extension, which will extend to either Celina, O., or Richmond, Ind., or both. The first stretch of the extension will be built to Berne, Ind.

**Thief River Falls, Minn.**—A company has been organized and incorporated to build an electric railway from this city northwest into upper Beltrami county; \$50,000 worth of stock was subscribed.—D. N. Winton has been elected President.

**Little Falls, Minn.**—F. E. Cawley of Minneapolis proposes an electric car line from this city to a connection with the Soo line at Gregory, about seven miles.

**Asheville, N. C.**—The Asheville Street Railway Company proposes to extend its line to the Kenilworth Inn; Manager G. C. Rogan of Kenilworth Inn will have charge of construction.

**Haverstraw, N. Y.**—Village Trustees have granted franchise for right of way through the village to the West Shore Traction Co., which is controlled by Searing & Co., New York.

**Findlay, O.**—The Findlay-Marion traction project has been financed and construction work will be started in March.

**Muskogee, Okla.**—The Muskogee Electric Traction Company will let contracts at once for building 2½ miles of track. R. D. Long is General Manager, Muskogee; R. D. Benson, Vice-President, 11 Broadway, New York.

**Slatington, Pa.**—Right of way has been secured from I. W. Cramp, Engineer, 2118 North Fourth street, Harrisburg, and surveys are made for the Franklin and Towamensing Electric Railroad. There will be one three-span bridge. The line will be eleven long, extending to Lehighton.—A. P. Berlin, President, Slatington.

**York, Pa.**—Surveys will begin in a few days for the York and Shrewsbury Electric Railway. It will connect these two cities and will be about fourteen miles long. Right of way has not been secured yet. D. B. Goodling is President, Loganville, Pa.; J. H. Keller, Secretary, Shrewsbury; S. M. Manifold, Chief Engineer, York.

**Aberdeen, S. D.**—J. A. Cleaver and others, of Huron, S. D., will apply to Council for a twenty-year franchise to equip and maintain an electric street railway in Aberdeen.

**Grafton, W. Va.**—The Grafton Traction Company is considering plans to build an extension about a mile and a half long through South Grafton to the west side.—John T. McGraw, President.

## BRIDGES

**Canyon City, Col.**—The Counties of Fremont and Teller will jointly build a bridge over Four-Mile Creek, connecting the road from Florence to Cripple Creek.

**Silt, Col.**—The Garfield County Commissioners rejected all bids for the steel reinforced concrete bridge with 252-foot span and concrete abutments, across the Grand river at Silt, which was designed to hold up a sixteen-ton traction engine, and State Engineer T. W. Jacox, Denver, is preparing plans, specifications, etc., for a less expensive structure to hold up a twelve-ton engine; the State's appropriation is \$4,000 and Garfield County Commissioners' \$10,000; the cost will be kept within the appropriation; for further particulars address State Engineer or Clerk of Garfield County.

**Bridgeport, Conn.**—The Board of Apportionment has voted to apportion off \$290,000 for the bond issue of \$350,000 authorized by the last session of the Legislature, for the new Congress street bridge. As soon as Council confirms this action the money will be available, the act providing that both of the Boards mentioned must apportion off the amounts for the different improvements.

**Bridgeport, Conn.**—Plans have been prepared for strengthening the lower bridge on Stratford avenue, and have been approved by the Director of Public Works; estimated cost, \$17,000.

**Newton, Ga.**—Georgia, Alabama and Western Railroad contemplates erecting draw-bridge.—J. A. Kaufman, President and General Manager.

**Rome, Ga.**—The County Commissioners propose to construct several concrete bridges in place of iron ones.—J. R. Cantrell, Commissioner.

**Chicago, Ill.**—The Engineering Committee of the Drainage Board has decided to build a new bascule bridge across the Chicago River at Twelfth street; the Engineering Department has been instructed to prepare plans for the new bridge, and bids for erecting the structure will be advertised for within a few weeks; estimated cost, \$350,000.

**Indianapolis, Ind.**—Bids will be received April 11 for the purchase of \$200,000 twenty-year Marion County refunding bonds, interest 3½ per cent; also for \$100,000 3½ per cent, twenty-year Marion County bridge bonds.—Albert Sahn, Auditor of Marion County.

**Marion, Ind.**—The new and expensive steel and concrete bridge over the Mississippi River, on the outskirts of this city, has been damaged.—Address Mayor.

**Council Bluffs, Ia.**—Engineer S. L. Etnyre is preparing preliminary plans for a reinforced concrete bridge, with 40-foot span, 66 feet wide, at Eighth street, for this city.—W. F. Sapp, City Clerk.

**Davenport, Ia.**—Franchise has been granted to the Davenport Wagon Company to build two bridges across Third street; the ordinances provide that the bridges be at least 18 feet above the level of the street; if the building is less than 300 feet in length one bridge is to be erected, while if it is more than 300 feet long two bridges may be built; the design and construction are to be approved by the Board of Public Works.

**Muscatine, Ia.**—The Chicago, Milwaukee and St. Paul Railway will build a concrete bridge across Muscatine slough.—J. A. McDonnell, Superintendent, Ottumwa.

**Henderson, Ky.**—A company will be incorporated to build bridges across the Ohio River.—J. W. Wartman and Frank Posey of Evansville, Ind., and others, incorporators.

**Richmond, Mo.**—The City Engineer has been instructed to prepare plans and specifications for the construction of a bridge on Whitmer street and extension of bridge on College street; bids will be asked at once.

**Oakland, Neb.**—Council has published a call for bids for 180 feet of approach to the new steel bridge recently ordered by the County Commissioners across Silver street; the notice asks bids on both steel and wooden approach; the bridge proper will cost the county about \$6,300 and the approach will cost the city between \$1,800 and \$2,500.—Address City Engineer.

**Plattsmouth, Neb.**—The wagon bridge at Louisville over Platte River was partially taken out by an ice gorge.—Address County Auditor.

**Middletown, N. Y.**—The directors of the Middletown and Wurtsboro Turnpike Company have voted to replace the bridge over the Shawangunk Kill, at Bloomingburg, which was carried away by the high water, with a new structure, and President T. L. Reeve and Secretary R. C. Tutill were empowered to get bids for both wood and steel construction and report at a future meeting.

**Hamilton, O.**—The County Commissioners have under advisement the question of building a new bridge at East High street, and the Traction Company is waiting their decision pending the extension of their lines.

**Tulsa, Okla.**—The Tulsa County Commissioners have engaged R. K. Hughes, Bridge Constructing Engineer, to prepare plans and specifications for sixteen bridges to be built across Tulsa County streams; iron will be probably used.

**Pittsburg, Pa.**—The Allegheny County Commissioners have agreed to construct the bridge if Sewickley will bear the expense of damage to property on each shore; a committee composed of Wm. Dickson, James Cochran, Joseph Craig, Attorney R. P. M. McCready and E. A. Shaw has been working on the project; to acquire property for abutments will cost at least \$13,000; if Sewickley agrees to raise this amount a bridge costing about \$500,000 will be erected by the County.

**Portland, Ore.**—Council has passed ordinance appropriating \$1,000 and authorizing the employment of a consulting engineer to assist D. W. Taylor, City Engineer, to prepare plans and specifications for the construction of a high bridge across the Willamette River north of the steel bridge; estimated cost, \$3,000,000.

**Vancouver, B. C., Can.**—Engineers Waddell & Harrington, Kansas City, Mo., are preparing plans for a steel bridge for the city of Vancouver; the engineers have contract for bridge work amounting to \$1,000,000; \$600,000 of this work will go ahead at once—one draw bridge and one bascule bridge.

**New Westminster, B. C., Can.**—J. A. L. Waddell, 2708 Forrest avenue, Kansas City, Mo., has estimated the cost of the Lulu Island steel bridge at \$76,000.

**St. Stephen, N. B., Can.**—The New Brunswick Southern Railway Company is asking Parliament for authority to construct a bridge over the St. Croix River.—R. J. Austin, St. John, N. B., Bridge Foreman.

**Quebec, Que., Can.**—The Quebec Bridge Company has decided to rebuild the steel cantilever bridge over the St. Lawrence River, which collapsed last spring.

## MISCELLANEOUS

**Bridgeport, Conn.**—The Board of Apportionment has appropriated \$7,500 for a new garbage reduction contract, with the understanding that the garbage plant will be removed from this city and the garbage transported by either rail or water to some other location outside of Bridgeport. This will do away with the nuisance which the reduction plant has created on the East Side.

Public Works Director Biltz gets an appropriation for an automobile runabout, while the item of \$2,000 for a new road roller is stricken from the list.

**Atlanta, Ga.**—Councilman T. D. Longino has introduced resolutions in Council calling for a charter amendment, giving the city the right to hold an election for the issuance of \$1,000,000 bonds, with which to make needed city improvements, among them building a City Hall, fire engine house and school buildings, paving streets, laying sewers and extending water mains.

**Vincennes, Ind.**—The Star Tankage and Fertilizer Company will soon ask for bids for the construction of a garbage plant, tanks, etc., on the site of the plant recently destroyed by fire; estimated cost, \$35,000.

**Rye, N. Y.**—The village is to expend \$480,000 for public improvements; these will include sewers to cost \$300,000, roads to cost \$125,000, fire house to cost \$40,000 and dock to cost \$15,000.—Chas. S. Towle, 7 East Forty-second street, New York, Village Engineer.

**Schenectady, N. Y.**—Alderman Tinnerholm favors the erection of a garbage disposal plant and has urged that the matter be placed in the hands of some committee to investigate and report; no action was taken by Council, but Mr. Tinnerholm is determined to keep the matter to the fore until something is done.

**Lumberton, N. C.**—Bids will be received March 23 for the purchase of \$25,000 6 per cent, thirty-year city bonds.—E. J. Britt, Mayor.

**Canton, O.**—The City Engineer is to prepare preliminary plans and estimates for protecting the manufacturing district in the neighborhood of the Burger Company from the floods.

**Columbus, O.**—Contract for building a greenhouse in Schiller Park was let to Barron & Fuestel, 549 South Sixth street, for \$4,925.—Edward W. Hirsch, Secretary Board of Public Service.

**Providence, R. I.**—Acting upon the opinion of the City Solicitor, which was to the effect that the action of the Board of Aldermen in awarding a contract to Charles E. Clarke of Seekonk, Mass., for the collection and removal of swill and household garbage for a period of five years was illegal, in that an aye and no vote had not been called upon the question when it was before that body, the Common Council has voted not to concur with the Board in the approving of that contract. This leaves the garbage question just where it was before bids were advertised for.

## BIDS RECEIVED

**Ft. Morgan, Ala.**—The McKay Engineering Co., Baltimore, Md., has the contract, at \$7,912, for the construction of nine cisterns at Ft. Morgan.

**Montgomery, Ala.**—The Board of Revenue of Montgomery County has let contract to O. J. Pruett, city, at \$38,037.23, for grading and graveling 10 miles of the Flowers road, for graveling 3.85 miles of the Old Pike road and 3.5 miles of the road connecting the above mentioned roads.—J. T. Bullen, County Engineer.

**Pigott, Ark.**—The Board of Directors of the St. Francis Drainage District of Clay and Green Counties have contracted with A. V. Wills & Son of Pittsfield, Ill., to construct the big ditch, or canal, running through Clay and Greene Counties, a distance of about thirty-two miles, and emptying into the St. Francis River at the lower end of Bakewells Lake. The contract price is about \$200,000 and work is to commence as soon as the material and machinery can be placed on the ground. They also contracted with W. D. Lasswell of Campbell, Mo., to build an extension to the old levee on the St. Francis River in Clay County, the contract price being about \$35,000, work to commence as soon as dredge boat can be built and equipped.

**Hartford, Conn.**—Twelve bids were received on Feb. 26 by the Connecticut River Bridge and Highway District for furnishing and erecting in place the tunnel roof beams

in connection with the western approach to the Connecticut River bridge at Hartford. The Berlin Construction Company, Berlin, Conn., submitted the lowest bid. John T. Henderson is Deputy Chief Engineer Connecticut River Bridge and Highway District.

**Pine Bluff, Ark.**—Jacob Althous, Burlington building, St. Louis, Mo., was the lowest bidder, at \$53,935, for the erection of the U. S. Post Office building.

**Sulphur Springs, Ark.**—Architect J. B. Mason, Paxton building, Omaha, Neb., has let general contract to Carl Nilson, Scarritt building, Kansas City, Mo., for a three-story brick and stone sanitarium, 52x80 feet, for Edwin B. Magill, Omaha, for \$10,000.

**Santa Monica, Cal.**—J. D. Kneen was low bidder, at \$11,294, for the construction of a cement walk from pier to Hollister avenue.

**Washington, D. C.**—The Commissioners have awarded the contract for furnishing the District with terra cotta sewer pipe material for the next fiscal year to the American Sewer Pipe Company of Pittsburgh. The lowest bid received was that of the W. W. Clark Company of Baltimore, whose price was \$5,900. The bid of the American Sewer Pipe Company was \$6,105. In awarding the contract to the latter company the Commissioners explained that the sample of their terra cotta was preferable to that of the Clark Company. The details of the bids follow: (a) 21-in. pipe; (b) 18-in. pipe; (c) 12-in. pipe; American Sewer Pipe Co., Bessemer Building, Pittsburgh, Pa., (a) 64.25 cents, (b) 44 cents, (c) 28 cents; National Fireproofing Company, Colorado Building, Washington, (a) 70 cents, (b) 47.6 cents, (c) 28 cents; Lamond Bros., Lamond, D. C., (a) 25 cents; A. McB. Porter, Pittsburgh, Pa., (a) 63 cents, (b) 42.5 cents, (c) 25 cents; Patton Clay Manufacturing Company, Patton, Pa., (a) 67.5 cents, (b) 45.9 cents, (c) 27 cents; William Wirt Clarke & Son, Monument and Forrest streets, Baltimore, Md., (a) 62.5 cents, (b) 42.5 cents, (c) 25 cents.

Bids were received as follows on March 2 at the office of the Commissioners of the District of Columbia, for the construction of a sewer in the valley of the Soapstone River and Broad Branches between Rock Creek and Thirtieth streets, Washington: (a) E. G. Gummel, 300 Rhode Island avenue, Washington; (b) Warren F. Brenizer Company, Howard avenue, Anacostia, D. C.; (c) R. J. Beall Construction Company, 1219 F street, N. W., Washington; Ordinary excavation, (a) 70 cents, (b) 65 cents, (c) 89 cents; sewer brick masonry, (a) \$14, (b) \$16, (c) \$19; rock excavation, (a) \$4, (b) \$3.50, (c) \$4; 21-in. diameter pipe, (a) 93 cents, (b) \$1.19, (c) \$1.26; 18-in. diameter pipe, (a) 85 cents, (b) \$1.06, (c) \$1.18. Totals, (a) \$7,018, (b) \$7,544, (c) \$8,875.

Major J. Jay Morrow, Engineer Commissioner, has recommended the acceptance of the proposal of the Erkins Company of New York to execute in concrete four lions and to place them upon the newels of the Connecticut avenue bridge. The price named is \$4,000. Major Morrow says that it was not practicable to take bids for the lions in the open market because the excellence of the sculptural work depends upon the ability of the artist to produce the desired results. After a careful investigation it was found, he says, that only the Emerson & Norris Company of Boston and the Erkins Company were competent to execute the work, and as the bid of the Erkins Company was the lower it should be awarded the contract.

**Boise, Idaho.**—Thomas Finnegan was low bidder for constructing sewers, at \$8,212.64; the Idaho Hardware and Plumbing Company bid \$8,434.18; Acme Plumbing and Heating Company, \$10,268.62, and the Liberty Plumbing and Heating Company, \$10,699.75.

**Terre Haute, Ind.**—The Board of Commissioners of Vigo County have let contract to Hawkins Bros., Brazil, for constructing two miles of macadam road.—Nathan G. Wallace, County Auditor.

**Des Moines, Ia.**—The State Board of Agriculture let contract to J. B. McGarrick, city, for the erection of an administration building on the State Fair Grounds; A. H. Walker got the contract for plumbing.—J. C. Simpson, Secretary; Smith, Wetherell & Gage, architects, 300 Youngerman building.

**Alma, Kan.**—G. Jaeger of Rich Hill has been awarded contract for constructing water works, at \$2,918.99, as follows: 40 cubic yards rock excavation in trench, at \$2.50; furnishing and laying 1,937 feet 2-inch galvanized pipe, at 29 cents; hauling and laying 4,292 feet 4-inch c. i. and universal pipe, at 19 cents; hauling and laying 6,099 feet 6-in. c. i. and universal pipe at 22 cents; hauling and setting 21 hydrants, at \$4. The Des Moines Bridge and Iron Company bid \$3,841.88; Matt & O'Brien, \$3,532.83; A. A. Lund and E. Hood, Blackwell, Okla., \$3,927.33, and Olsen & Co., Alma, Neb., \$3,538.42.

The Rensselaer Valve Company has contract for hydrants and valves, at \$709.50, as follows: Twenty-one 4-in. hydrants, at \$25

each; two 2-in. gate valves, at \$2.75; five 4-in. gate valves, \$6.20; ten 6-in. valves, at \$10, and sixteen gate boxes, at \$3. The Ludlow Valve Manufacturing Company bid \$777.64; Chapman Valve Company, \$673.11; Bourbon Copper and Brass Works, \$681.95; James B. Clew & Sons, \$776.06; Western Valve Company, \$776.15.

G. Jaeger also has contract for furnishing 147 tons of 4 and 6 in. pipe, at \$32, and 5,200 lbs. of specials, at 3 cents; total, \$4,860. The Des Moines Bridge and Iron Company bid \$5,067; H. B. Vinig, \$5,000.50; Dimmick Pipe Company, \$4,704.

The Des Moines Bridge and Iron Works has contract for standpipe, 16 feet diameter, 50 feet high, at \$2,800, foundations at \$510 and standpipe at \$2,290; the Chicago Bridge and Iron Works bid \$2,100 for standpipe and \$210 for balcony; the Midland Bridge Company, \$3,174; the Kansas City Structural Steel Company, \$2,300 for standpipe and \$200 for balcony; Kaw Valley Bridge Company, \$2,200.—Burns & McDonnell, Kansas City, Mo., Engineers.

**Emporia, Kan.**—Haskins & Ramsey were awarded the contract for grading, curbing, guttering and paving Neosho street, and J. E. Northington for the construction of an extension to storm water sewer on Neosho street.—G. O. Mathewson, City Clerk.

**Herington, Kan.**—The Squire Electric Company of Kansas City, Mo., has been awarded contract for water works and lighting plant, at \$32,750, as follows: Concrete, \$10; rock, \$3; laying 4-in. pipe, 65 cents; 10-in. pipe, \$1.46; 8-in. pipe, \$1.14; setting and furnishing hydrants, \$32.50; 4-in. valves, \$11; 6-in. valves, \$17.50; 8-in. valves, \$25; wells, \$2.50 per foot. Other bids were: W. F. Hull, Clinton, Mo., \$46,964; Freeboro Engineering and Construction Company, Kansas City, Mo., \$43,000; N. S. Sherman, Oklahoma City, Okla., \$39,967.73; T. C. Brooks & Son, Jackson, Mich., \$37,300; Havemeyer Construction Company, 29 Lake street, Chicago, Ill., \$34,884.—Burns & McDonnell, Kansas City, Mo., Engineers.

**New Orleans, La.**—The sewerage and Water Board has let contract to Jos. A. Craven & Co., 310 Macheca building, at \$1,435.80, for paving with square block Marals and Liberty streets, between Orleans and St. Ann streets.—Geo. G. Earl, General Superintendent.—F. S. Shields, Secretary.

**New Orleans, La.**—Architects Crosby & Henkel let general contract to the James Stewart Construction Company, St. Louis, Mo., for the five-story Delgado Memorial Hospital; \$100,000.

**Boston, Mass.**—Contract for an addition to the Relief Hospital has been let to Whitcomb & Cavanaugh, at \$41,000.

**Holyoke, Mass.**—The General Electric Company has been awarded contract for two exciters, at \$3,520; one is a motor generator and the other a turbo exciter set.

R. N. Magna has been awarded contract for an auto delivery for the Gas and Electric Department to deliver meters, at \$1,295.—W. H. Snow, Manager.

**Jackson, Mich.**—The Board of Public Works let contract to the Reinforced Concrete Pipe Company, city, for about 5,000 feet of reinforced concrete pipe sewer.

The Board of Public Works let contracts for paving as follows: West Main street, Cleveland Trinidad Paving Company; Wildwood avenue, Charles A. Horrind.—J. F. Harrison, Superintendent.

**Manistee, Mich.**—Contract for 4,480 square yards of paving on Maple street was let to the Bitulithic Paving Company, Detroit, for \$11,584.94.—C. A. Gnewuch, City Clerk; G. W. Pike, City Engineer.

**St. Peter, Minn.**—John Lohse, 372 East Fifth street, Winona, Minn., sublet carpenter contract to Fred Huseman, 627 Grand street, Winona, for a two-story press brick and stone tuberculosis hospital, for Minnesota State Hospital.

**Stillwater, Minn.**—W. D. Lovell, of Minneapolis, has been awarded contract for constructing complete water works system for new State prison, for \$19,500.—J. D. Mills, Secretary, State Board of Control, St. Paul.

**Hattiesburg, Miss.**—Council has awarded to T. P. Crymes the contract for constructing sewers in the territory north of the Mississippi Central Railroad at a cost of \$38,700.

**Maryville, Mo.**—The following contracts were let for the erection of the Nodaway County Poor House: General construction, Borrusch Bros., city, \$24,541; heating, plumbing and lighting, H. H. Martin, city, \$3,746.20.—Geo. W. Demott, County Clerk; A. A. Searcy, architect.

**Sikeston, Mo.**—Architects Matthews & Clarke, St. Louis, have let general contract to Frank Heiser, Sikeston, for a two-story City Hall.—Dr. Malone, Mayor.

**Webb City, Mo.**—William Glenn, city, was awarded the contract for constructing a sewer in District No. 17.—W. E. Smith, City Engineer.

**Lincoln, Neb.**—Contract for constructing sewers in Sewer District No. 39 was let to

H. C. Gardner, city.—Thos. H. Pratt, City Clerk.

**York, Neb.**—J. H. Wiese, 1506 North Twenty-sixth street, South Omaha, was awarded the contract, at \$52,412, for the construction of the U. S. public building.

**Albany, N. Y.**—John C. Wasserbach has been awarded the contract for removing the street dirt for another year, by the meeting of the Board of Contract and Supply, at \$10,150, this being the lowest bid. Other bidders: Long & Simpson, \$11,500; Union Trucking and Storage Company, \$11,000; Emanuel Wenger, \$10,500; J. J. Morrissey, \$10,395.

**Ft. Wright, N. Y.**—H. H. Morgan, New York City, has the contract for the construction of roads, at Ft. Wright.

**Buffalo, N. Y.**—The Metropolitan Construction Company was awarded the contract by the Sewerage Commission for constructing the extension of the Pratt street sewer to Sharp street, at \$105,895.—Francis Ward, Commissioner Public Works.

**New York, N. Y.**—Fire Commissioner Hugh Bonner opened bids March 3 for 100,000 feet of new fire hose, and awarded contracts to successful bidders for 80,000 feet. There were two lots for the Borough of Brooklyn. The first opened was for 10,000 feet of 2½-inch 4-ply rubber hose. The Diamond Rubber Company received the award on their bid of \$1.13½ cents per foot, aggregate \$11,350 for the lot. For 10,000 feet of 3-inch 6-ply high pressure rubber hose, the Republic Rubber Company was successful, their prices being \$1.64 per foot. For Manhattan the Republic Rubber Company was awarded the contract for 30,000 feet of 2½-inch 4-ply rubber hose at \$1.04 per foot, or \$31,200 aggregate. For 30,000 feet of 3-inch 6-ply rubber hose for high pressure service the Diamond Rubber Company was successful at \$1.73½ cents per foot, which is 9½ cents higher than the Republic bid for 10,000 feet for Brooklyn. One lot of 20,000 feet of 3-inch 5-ply rubber hose for regular service only brought out two bids, at a price higher than the Commissioner desired to pay, and he decided there had not been enough competition and ordered new bids. The advertisement for bids specified rubber hose in each lot, and in consequence the bidders of former days, all cotton hose men, did not figure in the bidding at all, for the first time in a long while.

The Sanitary Devices Manufacturing Company, 11 East Twenty-fourth street, has the contract, at \$6,560, for installing vacuum cleaning system in the U. S. Custom House.

**Poughkeepsie, N. Y.**—A bid, accompanied by a check, was received from Charles Efron, relative to removing the old gas posts. The bid was for 29 cents a post and all work to be done under the specifications sent out by the board. The contract was awarded to Efron.

**Asheville, N. C.**—David Getaz, Sons & Co., Knoxville, Tenn., have the contract, at \$56,300, for the construction of the U. S. Post Office.

**Cambridge, O.**—P. E. Gibson is low bidder for street paving, plans for which have been prepared by Engineer J. N. Hogue; his bid was \$20,000 with cement filler, and \$800 more for tar filler.

**Cincinnati, O.**—W. P. Flynn has the contract for the improvement of Hamilton pike at his bid of \$23,000.

**Cleveland, O.**—John Grant & Son are the lowest bidders, at \$218,000, for the construction of the West Side market house.

**Ironton, O.**—The Ironton Construction Company, H. W. Mountain, General Manager, has been awarded a \$45,000 contract at Hamilton, for constructing a concrete sewer.

**Lima, O.**—The Andrews Asphalt Company of Hamilton has the contract for a \$12,000 pavement on North and South Elizabeth street; asphalt will be used.

**Massillon, O.**—The American Sign Company, of Clyde, has been awarded the contract by the Board of Public Service, for supplying 500 signs with which to mark street corners of the city; single signs on brick buildings will cost sixty cents each and fifty cents each for those to be attached to frame buildings; signs and attachment for telephone poles will cost \$3.40 apiece, and the complete outfit, including pole and brackets for use where there are neither buildings nor telephone poles will cost \$6.00 each. The H. Clay Coyle Company, of Canton, wanted to supply single wood signs for sixty cents each and enameled signs at seventy-five cents each; wooden signs for poles were to cost \$1.90 each and enamel signs, \$2.30; wooden signs with complete equipment were to cost \$5.17 each and those made of enamel, \$5.57. The Standard Sign Company, of Pittsburg, quoted its price for single signs for frame buildings at forty-five cents, and for brick buildings at fifty-five cents; signs for telephone poles were to be supplied at \$1.80; the signs with posts complete were to cost \$4.90 each. While some of the bids were lower than that of the Clyde Company, the Board felt that in choosing it, it was getting the most serviceable signs.



**Mingo, O.**—The Village Council received six bids for the construction of the "Jumbo" or McLister avenue sewer; the lowest being presented by Charles F. Melville, local contractor, who was awarded the contract; his bid on the construction of the six-foot sewer was just 25 cents lower per foot than that of Floto Brothers, of Steubenville. The following bids were submitted: Charles F. Melville—6-foot sewer, \$8 per foot; catch basins, \$35; manholes, \$40. Floto Brothers—Sewer, \$8.25; catch basins, \$50; manholes, \$50. E. J. Bickerstaff—Sewer, \$11.40; catch basins, \$45; manholes, \$45. P. J. O'Brien Contracting Company—Sewer, \$11.95; catch basins, \$45; manholes, \$45. Castner Brothers—Sewer, \$11.35; catch basins, \$60; manholes, \$50. Paul & Kirchner, Dayton—Sewer, \$12; catch basins, \$35; manholes, \$40.

**Newark, O.**—The Board of Public Service has let contract to Frank H. Kinney, City, at \$3,449.96, for the construction of a tile sanitary drainage sewer in South Fifth street.

Brennan & Nottor were low bidders, at \$6,831.35, for paving South Fourth and South Fifth streets.—Albert C. Gundlach, Clerk Board of Public Service.

**Norwalk, O.**—J. M. Vaughn has been awarded general contract for repairs to the Huron County Court House, at \$11,461.64; G. W. Doersbaugh & Bro. bid \$16,380.20 on the general contract, while the Forest City Marble and Mosaic Company, bid \$660 for tile floor; \$520 for granolite floor, \$2,628 for Vermont marble and \$2,790 for white Italian marble.—F. O. Ronk, County Auditor.

**Piqua, O.**—The Board of Public Service has let contract to Martin & Shannon, city, at \$3,968, for the construction of a sewer, beginning at the south bank of the Miami River, near the head of Downing street.—W. B. Mitchell, Clerk.

**Portsmouth, O.**—Kelly Brothers, of Portsmouth, have been awarded contract for paving Findlay street with Peeble's block, at \$4,209; also for considerable sewer work.—Martin W. McMahon, Clerk, Board of Public Service.

**Springfield, O.**—Huonker & Williams were low bidders on the cleaning and dredging of Buck Creek; only three tenders were submitted, all by local men, which was a surprise, as inquiries had been received from several outside contractors. The bids were as follows: Huonker & Williams—Excavating or dredging, labor, 22 cents; material, 1 cent; total, 23 cents; grubbing, per acre, labor, \$175; material, \$5; total, \$180. J. H. McHugh—Excavating or dredging, labor, 33 cents; material, nothing; total, 33 cents; grubbing, per acre, \$200 for labor, nothing for material. Charles Bird—Excavating or dredging, labor, 25 cents; material nothing; total, 25 cents; grubbing, per acre, labor, \$100; material nothing; total, \$100. It is planned to have the dredging start as soon as the weather will permit.—M. J. Bahin, Chief Engineer, Board of Public Service.

**Toledo, O.**—City Engineer Consaul has analyzed the figures bid for repaving Fulton street with asphalt and finds that the offer made by Garrigan Brothers, the low bidders, is just \$20,000 lower than the estimated cost, and they have been awarded the contract. The City Engineer, figuring on the highest priced material, placed an estimate of \$44,400 for the cost of repaving the street from Ashland to Kenilworth avenues, and the bid of Garrigan Brothers amounts to \$24,400. The figures of the other contractors are: H. P. Strelcher, \$26,699.30; S. J. Pickett, \$26,715.30; Andrews Asphalt Company, \$27,536.00; M. F. O'Sullivan & McKinney Brothers, \$27,654.50; Barber Asphalt Company, \$28,027; Russell & Jennison, \$29,081.

**Youngstown, O.**—The contract for construction of the new Mahoning County Court House was let, under conditions, to Caldwell & Drake, of Columbus, Ind., by the Building Commission. The cost of construction will be about \$850,000, though the exact figure has not been determined. The conditions have to do with materials and prices, in regard to which the selected contractors will be required to satisfy the commission; other bidders were the Noel Construction Company, John Gill & Sons and Wells Bros.

**El Reno, Okla.**—The P. F. Conley Contracting Company has the contract, at \$14,998, for the construction of sanitary and storm sewers.—R. N. Whittlesey, City Engineer.

**Hobart, Okla.**—T. C. Brooks has the contract for extensions to the water works.—A. W. Kerr, City Clerk.

**Lawton, Okla.**—Kerby, Mayfield & Shaw have been awarded the contract for the construction of a water works system for the Fifth Ward at \$20,000.—Frank B. King and John D. Kennard, Engineers.

**Cambridge Springs, Pa.**—The contract and bond of the Pittsburgh Filter Manufacturing Company for the construction of the proposed filtration plant in connection with the city water works, upon which further cor-

respondence had been asked at a previous meeting, was cleared up in a satisfactory manner, and a resolution was unanimously approved by the Borough Council and permission was given the contractor to sublet the concrete work on the filtration plant to Messrs. Blystone & Campbell.

**Freeport, Pa.**—Contract for sewerage and improving portions of Second and Fifth streets, was let to J. G. McGuire, New Brighton, Pa., for \$12,010.—H. L. Kiskadden, Borough Secretary; G. B. Findley, Borough Engineer.

**Hazleton, Pa.**—Bids were received from the Hazleton Electric Light & Power Company and from the Consumers' Electric Light and Power Company. Each company bid on three propositions, as follows: First proposition, for a term of three years: Enclosed arc lamp, per light per year, Edison \$59, Consumers' \$49; Magnetite Luminous arc, per light per year, Edison \$49, Consumers' \$44; open arc lamps, per light per year, Edison \$63, Consumers' \$54; metallic flame arc, per light per year, Edison \$49, Consumers' \$44. Second, proposition, for a term of five years: Enclosed arc lamp, per light per year, Edison \$57, Consumers' \$48.50; Magnetite Luminous arc, per light per year, Edison \$46, Consumers' \$43; open arc lamps, per light per year, Edison \$62, Consumers' \$54; metallic flame arc, per light per year, Edison \$46, Consumers' \$43. Third proposition, for a term of ten years: Enclosed arc lamps, per light per year, Edison \$55, Consumers' \$48; Magnetite Luminous arc, per light per year, Edison \$45; Consumers' \$43; open arc lamp, per light per year, Edison \$60, Consumers' \$54; metallic flame arc, per light per year, Edison \$45; Consumers' \$43.

**Hughestown, Pa.**—The Borough Council has let a ten years' contract to the Citizens' Electric Illuminating Company of Pittston; The Westinghouse Flame Arc Lamp, the General Electric Magnetite Luminous Arc Lamp, Enclosed Series Arc Lamp, and the Open Arc Lamp were all on exhibition on Main street, Pittston, and, after a thorough examination of all the lamps, Councils decided unanimously to adopt the Westinghouse Flame Arc Lamp.

**McKeesport, Pa.**—The Westmoreland County Commissioners have let the contract for the construction of a State road of macadam from Irwin to pass through Circleville and connect with the State road running from McKeesport through Versailles Township to the Greensburg pike, at \$46,530.25.—D. W. Shupe, W. D. Reamer and B. C. Shaffer, Commissioners; A. M. White, Supervisor of North Huntingdon Township.

**New Castle, Pa.**—Patrick Joyce, a Youngstown contractor, has been awarded the contract for the construction of the Fifth Ward sewer at his bid of \$14,206, which was \$2,470 below the next lowest figure; the engineer's estimate was \$14,690, which proved how close Mr. Joyce figured to secure the work.

**Philadelphia, Pa.**—Bids for four new horizontal pumping engines for the Shawmut and Belmont pumping stations, with capacities of five and ten million gallons a day, were opened by Assistant Director Knight. The proposals for the two engines at the Shawmut station, with a capacity of 5,000,000 gallons each, were as follows: Snow Steam Pump Company, \$78,000; time of installation, 280 days. Bethlehem Steel Company, \$87,500 and 300 days; Allis-Chalmers Company, \$81,500 and 300 days; D'Olier Engineering Company, \$93,134 and 210 days; Southwark Foundry and Machine Company, \$90,000 and 270 days, and the Conshohocken Company, \$73,000 in 133 days. The bids for the engines to be placed in the Belmont station, having a capacity of 10,000,000 gallons per day, included Walter Wood, \$122,000 in 300 days; Bethlehem Steel Company, \$88,520 in 225 days; Allis-Chalmers Company, \$107,900 in 240 days; Southwark Foundry and Machine Company, \$109,520, 300 days, and Filbert Paving and Construction Company, \$99,300, 230 days.

**Pittsburg, Pa.**—The Pittsburg and Westmoreland Railroad Company has contracted with the Westinghouse Electric Company for an entire new equipment, which will be installed shortly; the company has received larger cars that will be used then.

Architect Joseph L. Neal has let general contract to James L. Stuart for a five-story hospital building for the South Side Hospital Association; cost, \$200,000.

**Sayre, Pa.**—John Benger, of Corning, N. Y., has secured the contract to construct a Town Hall and Fire Department Building at Sayre.—Charles C. West, Chairman.

**Steelton, Pa.**—The bids for 1,000 feet of rubber or cotton hose of all kinds recently asked for by the Borough Council were opened by Assistant Secretary C. P. Feldt, bids being received from the Mineralized Rubber Company, of New York; Fabric Hose Company, of New York; Diamond Rubber Company, W. T. Maginnis, Steelton; Clement Restern Company; Gutta Percha Rubber

Manufacturing Company; Osgood-Sayer Company, and the Eureka Fire Hose Company. The bids, which ranged from 28 cents to \$1.20, were referred to the Town Property Committee.

The bids follow: Mineralizing Rubber Company, cotton hose, 64 cents per foot; mineralized cotton hose, 78 cents; cotton hose, standing 400 pounds pressure and four years' guarantee, 64 cents; same kind of hose at 350 pounds pressure, 60 cents; same kind of hose at 300 pounds pressure and three years' guarantee, 53 cents; rubber hose, 400 pounds pressure and four years' guarantee, 85 cents.

Fabric Hose Company; wax and pure gum treated hose, Keystone brand, \$1 per foot; Petral brand, 95 cents; Arrow brand, 90 cents; Arm and Hammer brand, 80 cents; Black Diamond, 90 cents. All of this company's hose was guaranteed for five years at 400 pounds pressure.

Diamond Rubber Company; double jacket hose, 88 cents per foot; two and one-half inch double jacket hose, 96 cents. This company's hose was cotton, with couplings, in 15-foot sections, and a five-year guarantee under 400 pounds pressure.

W. T. Maginnis; cotton and rubber lined and with no guarantee attached, two and one-half inch, 400 pounds pressure, 77 1/4 cents per foot; two and one-half inch at 450 pounds pressure, 83 1/4 cents; one-inch at 300 pounds pressure, 47 3/4 cents; two and one-half at 350 pounds pressure, 54 3/8 cents; two and one-half inch at 400 pounds pressure, \$1; two and one-half inch at 400 pounds pressure, \$1.20 1/4.

Clement Restern Company. This hose was all at 400 pounds pressure and fitted with Philadelphia couplings. Belmont rubber hose at five years' guarantee, 90 cents per foot; same brand and same guarantee, but cotton hose, 65 cents; cotton rubber lined hose at four years' guarantee, 60 cents; same kind of hose and same guarantee, but inferior quality, 40 cents.

Gutta Percha Rubber Company. All of this hose was at five-year guarantee and under 400 pounds pressure. Rescue brand cotton hose, 80 cents per foot; solid rubber hose, \$1; Maltese Cross hand rubber hose, \$1; Maltese Cross with special treatment, \$1.10.

Osgood-Sayer Company. This hose was cotton and rubber lined, with a three-year guarantee and 400 pounds pressure. First grade, 85 cents per foot; Navy Blue brand, 83 cents.

Eureka Fire Hose Company; Paragon brand, 400 pounds, five years, \$1 per foot; Red Cross brand, same as above, 90 cents; Red Cross, 250 pounds and four years, 60 cents; Eureka, 200 pounds, 40 cents; Twentieth Century, same as Eureka, 28 cents; rubber hose, 400 pounds and four years, \$1.10.

**York, Pa.**—A contract has been awarded by Council to the McShane Bell Company, of Baltimore, Md., for a bell for the Rescue Fire Company, at a cost of \$458.60; the bell is to weigh 1,530 pounds, or 2,200 in position with the fixtures; the contract calls for its delivery and placement by June 1, with a reduction of 2 per cent. off if paid within fifteen days.

**Scottdale, Pa.**—Eicher & Graft have been awarded contract for furnishing 4,075 feet 12-inch pipe; 1,350 feet 10-inch pipe, and 1,260 feet 8-inch pipe for Cinderson Run sewer and work will be started at once.—J. B. Hogg, Borough Engineer.

**Providence, R. I.**—Commissioner of Public Works Walter F. Slade opened bids to supply the Department with 51,000 pounds of lead pipe and 35,000 pounds of pig lead. Four bids were received for the lead pipe, all being for the same amount, and accordingly the contract will be divided. The four companies entering bids are the Congdon-Carpenter Company, the L. A. Tillinghast Supply Company, the Phillips Lead and Supply Company and the Miller Iron Company. The contract for the supply of pig lead was awarded to the Nassau Smelting and Refining Company of New York.

**Big Spring, Tex.**—The general contract for building the Howard County Court House was let to L. B. Westerman, Dallas.—L. A. Dale, County Judge; Lang & Witchell, architects, Dallas.

**Waco, Tex.**—Ockander Bros. have the contract to grade approaches to the big steel bridge, which spans the Brazos River at this place.

**Salt Lake City, Utah.**—The State Board of Land Commissioners has taken the first step towards the construction of the big reservoir to be built by the State twelve miles from Marysville in Piute County, at a cost of \$250,000, by opening bids for the construction of the 420-foot tunnel and approaches. The following bids were received for the work: Campbell Building Company, \$13,135; John C. McGhie, Ogden, \$12,759; Frank L. Hines, Salt Lake, \$13,162.50; R. D. Young, Richfield, \$8,978; Nelson & Skougaard, Richfield, \$9,095. For the construction of the tunnel only the

following bids were received: R. W. Levey, Panguitch, \$6,800; James Long, Marysvale, \$6,183.50; W. E. Thurber, Richfield, \$6,980. Bids were also submitted by Charles O. Christensen of Elsinore and Dennie Bros. of Marysvale, but they were not considered, because the bids were not accompanied by a certified check. The project when completed will be one of the largest in the State and will irrigate 20,000 acres of land.

**Fort Ethan Allen, Vt.**—G. S. Blodgett Company, Burlington, Vt., have the contract, at \$2,195, for renewing urinal stalls in four double barrack buildings at Ft. Ethan Allen.

**Montpelier, Vt.**—Swallow & Howes, New York City, were low bidders for the City Hall, at \$125,000.

**Blackstone, Va.**—I. J. Smith, Richmond, has the contract for the construction of sewer system.

**Ft. Monroe, Va.**—Proposals for the plumbing work in public buildings to be erected were opened by Capt. Ernest R. Tilton, Constructing Quartermaster, in charge of public buildings; the buildings to be erected are five sets of double captains' quarters, one set of lieutenants' quarters, one set of field officers' quarters and three sets of non-commissioned officers' quarters; the lowest bid submitted was by the Newport News Plumbing and Heating Company, of Newport News, Va., of \$12,066; James Nolan & Sons bid \$14,096; Darnall & Jones, \$17,165; and Joseph S. Reynolds, \$22,419; all being from Washington, D. C.

**Norfolk, Va.**—The contract for laying the laterals for the construction of the Seventh Ward sewer system was awarded by the Seventh Ward Local Board, to Guild & Co., Chattanooga, Tenn., at about \$34,000.

**Richmond, Va.**—Trustees for the John P. Branch public baths opened bids for the erection of the bathhouse at Eighteenth and Broad streets in the office of Chairman James Caskie. Six bids were submitted by Richmond contractors, as follows: W. A. Chesterman, \$21,785; John T. Wilson, \$22,225; John T. Nuckols, \$22,542; Gilbert J. Hunt, \$22,963; A. C. Bedford & Co., \$23,485; James Fox & Son, \$23,875. No action was taken by the Trustees in awarding the contracts, as certain differences in the specifications have to be taken into consideration. Mr. Branch gave \$25,000 for the lot and building, the city to provide for the maintenance of the baths under the control of a board of trustees. In addition to the cost of the building the Trustees will have to pay for the lot at

Eighteenth and Broad streets, on which they have an option, and for the architect's fees. Chairman Caskie said that the situation looked quite hopeful, and there was every reason to believe the Branch baths would be under way within sixty days.

**Aberdeen, Wash.**—The following bids have been received for filling tide lands: Burrell Bridge and Construction Company, Oakland, Cal., \$338,513.42, bidding 24 3-4 cents per cubic yard for dyking and 33 cents for filling; Tacoma Dredging Company, Tacoma, \$284,211.72, with 20.7 cents for dyking and 49 cents for filling; Standard Amer. Dredging Company, \$279,755.02, with 20.41 cents for dyking and 39 cents for filling; North Amer. Dredging Company, \$270,160.87, with 19.75 cents for dyking and 27 cents for filling; David Loring, Portland, Ore., \$252,054.02, with 18 1-3 cents for dyking and 50 cents for filling. The original estimate as submitted was for 1,458,240 cubic yards, which for diplomacy covered the probable damages to be awarded, and 5,100 cubic yards of dyking, bringing the total maximum allowable cost to \$294,200.00. The fill if made will consist of approximately 1,360,931 yards of filling pumped from the Chehalis river and upper portion of Gray's Harbor, at estimated cost of 20 cents per cubic yard, \$272,186.20, and about 5,100 cubic yards of dyking thrown up from the inside of the proposed district, at 50 cents per yard, or \$2,550, which, with damages and incidentals estimated at \$19,463.80, makes the total. The district covers an area of about 28 city blocks or approximately 286 acres. The average depth of fill is 3.10 feet, and the maximum haul required will be about one mile. The North American Dredging Company agrees to complete the fill before the end of this year, and the bid of David Loring is contingent upon the city furnishing the material for filling. N. Amer. Dredging Company also agrees to take one-fourth of payment in bonds at par, if validity is established by court. Payment to be made on ten-year bonds running ten years, bearing 6 per cent., payable annually, and negotiated by city.—H. W. Troutman, City Engineer.

**Colfax, Wash.**—The Whitman county commissioners let contracts for the construction of nine steel bridges, as follows: Palouse bridge, steel, \$2,889, Sheeley Company, Denver, Colo.; Fair grounds bridge, steel, \$3,142, A. Valk, Pullman, Wash.; Winona bridge, steel, \$3,234, A. Valk; Albion bridge, steel, \$1,693, Sheeley Company, Denver; McClure bridge, combined wood and stone, \$2,275, A. Valk; Squaw Creek bridge, stone and wood,

\$842, including stone work, \$1,142, J. W. Janney, Tekoa, Wash.; Copeland bridge, stone and wood, \$945, O. H. Horton, Colfax; Endicott bridge, wood, \$320, A. Valk; Colton bridge, wood, \$527, J. W. Janney, Tekoa.

**Seattle, Wash.**—Major H. M. Chittenden, corps of Engineers, U. S. A., in charge of river and harbor work, opened the following bids for supplying sandstone for the jetty work at Gray's Harbor, 250,000 tons being required: Independent Asphalt Paving Company of Seattle, \$1.55 per ton; quarry located at Waldron Island, Wash.; National Stone Company, Tacoma, \$1.88 per ton; quarry located on the South Bend branch of the Northern Pacific. No award has as yet been made.

**Sutton, W. Va.**—Council has awarded contract to the Sutton Electric Light, Power & Water Company, of this place, to furnish the town with electric light and water for a period of 25 years, at the following rates: \$75 each, a year, for the first 12 lights; \$60 each for the succeeding 10, and \$50 each for all above the first 22 lights. For water, the town agrees to pay \$25 a year for each hydrant. The contract gives the town the privilege of purchasing the entire plant at the expiration of 25 years.

**Madison, Wis.**—The Modern Steel Structure Company of Waukesha was awarded the provisional contract for steel work for the east wing of the new capitol at Madison, for \$51,987.

**Winnipeg, Man., Can.**—The Canadian Iron and Foundry Company has been awarded contract for furnishing pipe, at \$7,054, submitting a price of \$41 per ton on 11,634 short tons of 6, 8, 10 and 14-inch cast-iron pipe and \$58 per ton for 70 tons of special castings. Other bids were: Wm. Jacks & Company, Glasgow, \$76,244.30; Stanton Iron Works, England, \$70,839.05; Gartshore Thompson Company, Hamilton, \$71,544; Evans, Coleman & Evans, Vancouver, B. C., English pipe, \$76,670.65; MacFarlane, Strange Company, England, \$71,845.50; U. S. Cast Iron Pipe and Foundry Company, \$72,780.80; Johnson, Clapham & Morris, England, \$80,483.50; R. D. Wood & Co., \$71,239.

The Canadian Fairbanks Company has contract for 200 fire hydrants, 6-inch connection, 2 hose and steamer, and 25 with 8-inch 3 hose and 1 steamer connection, length, 8 feet from pavement to bottom of pavement, at \$37.50 each; total, \$8,437.50; R. D. Wood & Company bid \$8,819 and the Norwood Engineering Company \$16,900.—W. Aldridge, Computer and Estimator.

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## Civil Service Examinations

**Bacteriologist.**—An examination for the position of Bacteriologist for the City of Savannah, Ga., will be held on Wednesday, April 15, 1908, at New York City, Chicago, Ill., Washington, D. C., New Orleans, La., and Savannah, Ga. The term of office will be five years; beyond political interference. Salary \$3,000 per annum. Examinations to cover Bacteriology, Pathology and Chemistry. The examination will be identical at all places of examination. Further information can be had from W. F. Brunner, M. D., Recorder Board of Examiners, City Hall, Savannah, Ga.

**Draftsman—Stenographer—Typewriter.**—The United States Civil Service Commission announces an examination, March 25, to fill a vacancy in the position of draftsman (stenographer and typewriter), either sex, at a salary of \$900 per annum in the Bureau of Plant Industry, Department of Agriculture. Application Form 304.

**Superintendent of Road Construction.**—The United States Civil Service Commission announces an examination, April 1, to fill a vacancy in the position of Superintendent of Road Construction, at \$4 to \$7 a day, Office of Public Roads, Department of Agriculture. Application Form 1312.

**Testing Engineer.**—The United States Civil Service Commission announces an examination, March 18, to fill two vacancies in the position of engineer in timber tests at salaries of \$1,000 per annum in the Forest Service, Department of Agriculture. Apply on Form 1312.

## WANTS

**WANTED.**—A young engineer, with some experience in street paving and sewer construction, as assistant to City Engineer; salary, \$75 per month. Address City Engineer, giving age, experience and recommendations. P. O. Box 271, Meridian, Miss.

**CLERICAL and technical positions** in all lines; positions in municipal and manufacturing; we can interest any ambitious man; write fully of experience; service confidential. Hapgoods, 305 Broadway, New York, or 1010 Hartford Bldg., Chicago.

## Proposals

## FURNISHING AND LAYING SEWER PIPE AND BUILDING SEWERAGE DISPOSAL WORKS

Auburn, N. Y., January 27, 1908.

Sealed proposals will be received by the Mayor, Hon. C. August Koenig, until 8 p.m., March 17, 1908, for the construction, first, of sewers and appurtenances thereto; second, for the construction of a disposal works for said sewer system. The sewers to consist approximately of the following: 14,700 feet of 8-inch, 11,300 feet of 10-inch, 6,000 feet of 12-inch, 3,600 feet of 15-inch, 300 feet of 18-inch, 1,250 feet of 20-inch.

Excavation varies in depth from 5 to 18 feet. There will be approximately 16,000 cubic yards of excavation, a part of the same being in solid rock. There will be about 17,000 feet of 5-inch vitrified tile for house sewer connections to be laid from the main sewer to the curb line. There will also be laid in the main trench and underneath the main sewer, as ground water demands, subsoil drains about as follows: 20,000 feet of 4-inch, 6,000 feet of 6-inch, 7,000 feet of 8-inch, 2,000 feet of 10-inch, 200 feet of 12-inch. All of the subsoil drain tile to be vitrified tile known as seconds. 84 manholes with an average depth of 9 feet; 12 flush tanks, 12 lamp holes.

The disposal work consists of reinforced concrete, septic tanks, and contact beds, and automatic appliances for dosing them.

For the sewers a bond for an amount equal to double the gross amount of the contract, or a certified check for \$5,000 will be required of all bidders. For the disposal works a bond for an amount equal to double the gross amount of the contract, or a certified check for \$2,500 will be required of all bidders. The contract will be let in two sections—Section 1 to consist of all sewers and appurtenances to the same, and Section 2 of the disposal works. Bidders may bid on either or both. The Common Council reserves the right to reject any or all bids. Specifications, general plans and blank forms of proposal may be seen at the office of the City Engineer, W. Thomas Wooley (from whom further information may be obtained), and will be ready for distribution February 15, 1908.

(6-11)

J. S. HANLON,  
City Clerk.

## DEBENTURES FOR SALE

City of Sherbrooke,  
Province of Quebec, Canada.

Sealed tenders will be received by the undersigned up to noon of Friday, the twentieth day of March, A. D. 1908, for the purchase of one hundred and seventy thousand dollars (\$170,000) worth of twenty-five years annuity debentures of the City of Sherbrooke, Province of Quebec, Canada, bearing interest at five per centum per annum. Interest and principal payable in half-yearly payments of five thousand nine hundred and ninety-three dollars and eighty-six cents on the second day of October and April in each year.

Tenders to be marked "Tenders for debentures."

For copies of by-laws and other information apply to the undersigned.

(10-11) F. J. GRIFFITH,  
Sec'y-Treasurer.

## GRANOLITHIC SIDEWALKS

Until March 16, 1908, the city of Grenada, Miss., invites proposals for furnishing material and laying 25,000, 50,000, 75,000 and 100,000 square feet, respectively, of granolithic sidewalks at a price per square foot. Right reserved to reject any or all proposals. Specifications on request. Address

COMMITTEE ON STREETS.

## WATER POWER SYSTEM

The town of Montezuma, Ga., desires bids for the construction of a canal water power system and complete pumping station.

All bids must be submitted by April 1, 1908, the Town Council reserving the right to refuse any or all bids submitted.

For details and further particulars address

DR. C. H. RICHARDSON,  
Mayor.

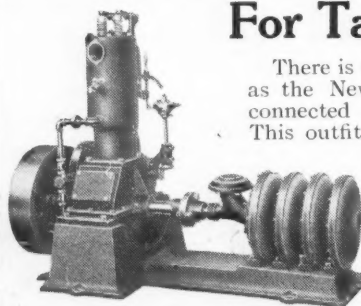
## STEAM HEATING PLANT

Port Gibson, Miss.

The Board of Supervisors of Claiborne County, Mississippi, will receive and consider plans at their March meeting, 1908, to put a steam heating plant in the Court House and jail.

By order of the Board.

A. K. BRASHEAR, Clerk,



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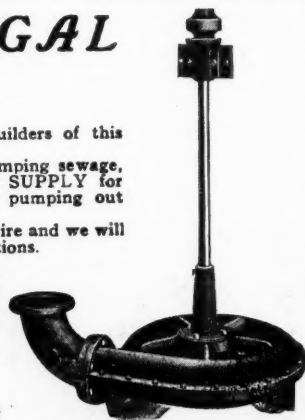
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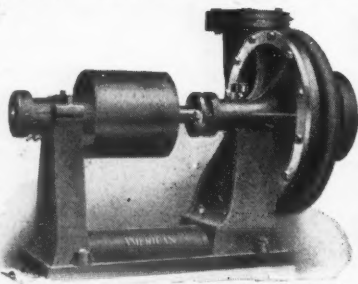
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